Energy Industry Survey of California Companies Exporting to International Markets FINAL REPORT

CONSULTANT REPORT

Prepared For:
California Energy Commission

Prepared By:
Power Project Financing

Report originally issued as part of 2003 California Energy Commission's International Energy Project Financing Conference

FEBRUARY 2005
(date published on Internet)
CEC-600-2005-006

Prepared By:
Organizational Architect & Associates

Contract No. not available

Prepared For:
California Energy Commission

Tim Olson,
Contract Manager

Chuck Mizutani,
Office Manager
Transportation Technology Office

Rosella Shapiro,
Deputy Director
TRANSPORTATION ENERGY DIVISION

Robert L. Therkelsen
Executive Director

August 13, 2003

Mr. Tim Olson, International Program Manager
California Energy Commission
Energy Technology Development Division
1516 9th Street, MS 45
Sacramento, CA 95814-5504

Dear Mr. Olson:

Enclosed, please find our Final Report on the Energy Industry Survey of California companies exporting to international markets.

If you need additional information please call or email and we will be delighted to provide it.

Sincerely yours,

Leonard W. Chapman
President and Chief Consultant

TABLE OF CONTENTS

EXECUTIVE SUMMARY

A – Background. In early April 2003 the Energy Technology Export Program (ETEP) of the California Energy Commission (CEC) contracted with ORGANIZATIONAL Architect And Associates (OAAA) to develop and conduct an energy industry survey of California Companies exporting to international markets. A questionnaire was created and sent to 610 California Energy Companies. A total of 152 (25%) questionnaires were returned.

B – Recommendations.

1. Develop program improvements based on the following tables and charts. These summaries provide the information that responding companies indicated will best support their exporting of goods and services.

    - Tab 6,Table 1, and Chart 9: Export Program Activities
    - Tab 6, Chart 11: Export Barriers
    - Tab 6, Table 3, and Chart 12: ETEP Services
    - Tab 6, Chart 13: Possible Future ETEP Options
    - Tab 7, Tables on pages 34-45 listing significant differences in requirements for various firm sizes, Business Activities, and Technologies.

C – Key Findings.

Findings 1-13 are derived from the 152 companies that returned completed questionnaires.

1. Sixty-eight percent (81% in 2000) of the respondents exported in the last three years and 84% (90% in 2000) plan to export during the next three years.
2. There continues to be two groups of companies, those new to exporting and those that have been exporting for some time.
3. Over the next three years, 70% (78% in 2000) of the companies expect their export revenue to grow at an annual rate of 10% or higher and 27% (30% in 2000) believe exports will row greater than 25% annually.
4. These companies indicated 61% (69% in 2000) of their exports will come from private sources and 32% (31% in 2000) from public sources (foreign governments). The remaining 7% will come from other sources, such as military, utilities, and industrial.
5. When asked to estimate the timeframe needed to initiate and complete business deals in export markets, 63% (64 % in 2000) indicated this could be accomplished in one year or less.
6. Fifty-six percent (79% in 2000) of the respondents indicated that electricity restructuring in the U.S. has lead to increased domestic sales. Even so, 31%

(34% in 2000) indicated that restructuring is causing them to consider selling in international markets and 41% (40% in 2002) indicated restructuring is causing them to consider new project development opportunities in international markets.

7. Over the next three years, companies see selling their products and services 76% (71% in 2000) domestically and 24% (29% in 2000) internationally.
8. Project facilitation support, financing advisory support, and pre-feasibility funding support are the top three activities listed for further improvement.
9. Mexico, China, and Canada are the most mentioned countries for export operations.
10. The top three barriers to exporting are lack of project financing with competitive terms, unsupportive regulatory/institutional policies, and the cost of seeing the project through to completion.
11. Six ETEP services were rated. All met or surpassed customer expectations.
12. The top three recommended ETEP future options are project pre-construction funding, identification of new investment funds, and promotional material and information transfer.
13. The overall performance rating given by all survey respondents to ETEP's active support and involvement in increasing California's energy industry exports is 3.8 out of 5.0.

Findings 14-17 are derived from the 19 companies (13 in 2000) that have been significantly involved with ETEP.

14. Fifteen percent (14% in 2000) of the response group have been involved in ETEP activities.
15. Responding companies indicated that 25% (39% in 2000) of their revenues were related to ETEP activities with a dollar value of $27,830,000 ($50,205,000 in 2000). One company, #43, reported their value of sales/revenue attributable to ETEP involvement as $25,000,000. The nature of these export sales were from project development 35% (33% in 2000), contract for services 29% (56 % in 2000), equipment sales 24 % (11% in 2000), turnkey operation (6%), and others (6%).
16. Sixty-five percent (62% in 2000) of the respondents indicated their involvement with ETEP caused them to increase their international business contacts.
17. Fifty-nine percent (62% in 2000) of the respondents indicated their knowledge of export market opportunities has increased due to their involvement in ETEP activities.

Finding 18 is derived from the nine break out groups studied in the survey.

18. Although useful operational patterns have been determined for the nine break out groups studied, the general conclusion is the break out groups are much different than they are similar in their wants and needs. **These differenced must be reconciled when planning ETEP support activities.**

DISCUSSION

A - Purpose. The California Energy Commission (CEC), Energy Technology Export Program (ETEP), contracted with ORGANIZATIONAL Architect And Associates (OAAA) to develop and conduct an energy industry survey. The purpose of the survey was to evaluate California's energy industries efforts to export their products and services. The questionnaire that was developed also enabled the industry to evaluate ETEP's support activities. The survey and subsequent evaluation will allow ETEP to focus its efforts on:

- Strategically implementing those programs that industry sees as high value.
- Recommending new activities based on industry suggestions and self-identified needs.
- Developing program information in support of CEC's Integrated Energy Policy Report that is delivered to the California Governor and State Legislature.
- Identifying the market focus of industry and supporting those markets where industry is in most need of assistance.

B - Background. This is the seventh industry survey conducted by ETEP since 1987. This approach allows ETEP to evaluate and improve its program as well as to stay current with industry needs. ETEP's proactive methods have resulted in:

- Opening new markets for California companies.
- Identifying new market opportunities for these companies.
- Creating new jobs and increasing revenues.
- Orienting companies toward global market opportunities as domestic markets become increasingly competitive.

The 1987 survey resulted in the study "The Impact of Policy Initiatives on International Export Growth for California's Energy Technology Industries". Since that report, six industry surveys have been conducted to track the growth of industry and help ETEP design new programs and focus efforts on activities that continue to have high payoff for the industry.

Each year, with each new annual operating budget, ETEP is asked to support a growing industry with fewer resources than it had in the preceding year. With the growing increase in energy demand in most regions of the world, ETEP needs to strategically structure its efforts to maintain its effectiveness to California businesses seeking to export.

This survey shows that ETEP is "doing more with less", and this program, unlike many other government programs, is assisting California industry to meet the needs of an expanding global market.

C – Methodology. A combination of email, fax, and mail was used to reach the energy companies. The distributed questionnaires were designed to obtain input from industry representatives in eleven energy technologies, across a wide spectrum of business focus and size. This was considered important, in order to obtain a broad array of perspectives on exporting and ETEP export assistance activities.

The survey questionnaire is similar to the 2000 questionnaire. Some improvements were incorporated. The questionnaire was organized as follows:

- **Part I – Background Information.** This section was designed to collect information to characterize the response group.
- **Part II – California Export Activities.** In this section, respondents were asked to identify their experience with exporting.
- **Part III – Industry Outlook.** This section identified impacts that companies have experienced from electricity restructuring, possible future mergers or buy-outs, and a new question on evaluation of trends that will impact conducting future international business.
- **Part IV – ETEP Program Assessment.** In this section, respondents were asked to provide feedback to the ETEP Program, value of this service, and what should be emphasized.

A copy of the questionnaire is included in Tab 9.

Surveys were distributed to 610 energy export companies. CEC staff and OAAA conducted the distribution. CEC staff provided subsequent telephone follow-up. The questionnaires were returned directly to the consultant (OAAA) for data entry and analysis. A total of 152 (25%) were returned and used in the data analysis of this survey.

Microsoft Word was used to develop the final report. Microsoft Excel was used to analyze the data obtained from the questionnaires and generate the charts and Tables contained in this report.

Three statistical concepts were used to assist in the evaluation of program excellence. These were:

- **Performance Measures**, as determined by **average** ratings of key attributes.
- **Performance Consistency**, as measured by **standard deviation** of the attribute averages.
- **Performance Predictability/Stability**, as measured by data driven **control limits**.

Tables were used to summarize important data findings. Bar and Pie charts were used to provide graphic representation of the data.

The data generated to provide insight into future program improvements needed to be prioritized. The technique used to accomplish the prioritization of alternative attributes was "gap analysis." Gap is simply the arithmetic difference between an attribute's importance rating (I) and that same attribute's performance rating (P), as viewed by the responding customers (the energy firms). Therefore, Gap = I – P.

Gap analysis is a way of prioritizing efforts that combines two essential ingredients. It not only takes into consideration how well ETEP is providing services to the firms but also how important the firms believe the services are to them.

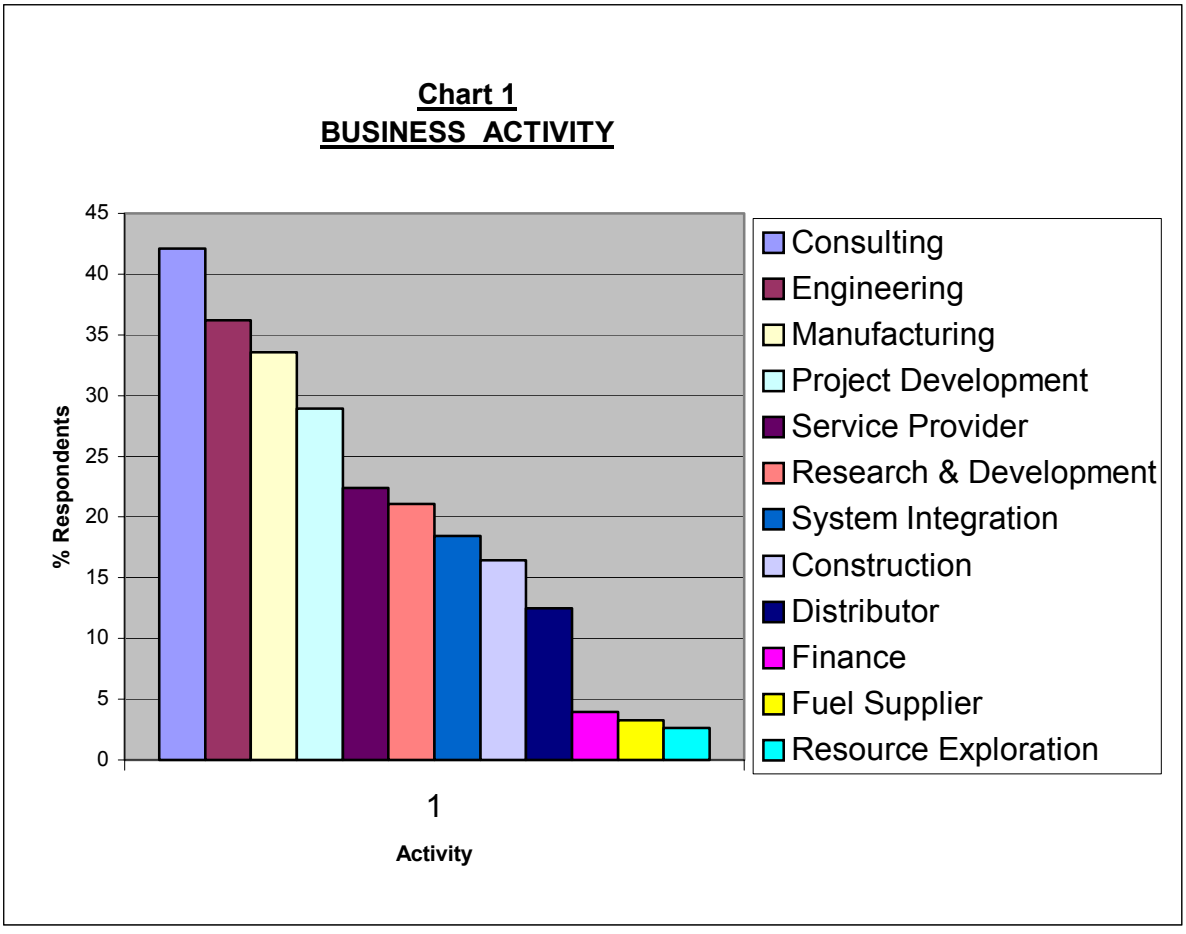
Attributes with large positive gaps are those that are important to the firms but have low performance ratings. These are the services that are opportunities for improvement. Attributes with small positive gaps are those that have performance ratings only slightly lower than importance ratings. These are less important than those with large gaps. Attributes with small negative gaps are those that have performance ratings higher than importance ratings. These are services that are surpassing customer (the energy firms) expectations. Using gap analysis ratings as a method of prioritizing future improvements, therefore, **is an excellent method to determine where to allocate limited ETEP resources.**

QUESTIONNAIRE BACKGROUND INFORMATION

This section of the report provides a profile of the type of companies involved in energy technology exporting activities in the State of California. In addition, it provides descriptive information on the size of the companies and their employment. This information came from the 152 companies responding to the survey.

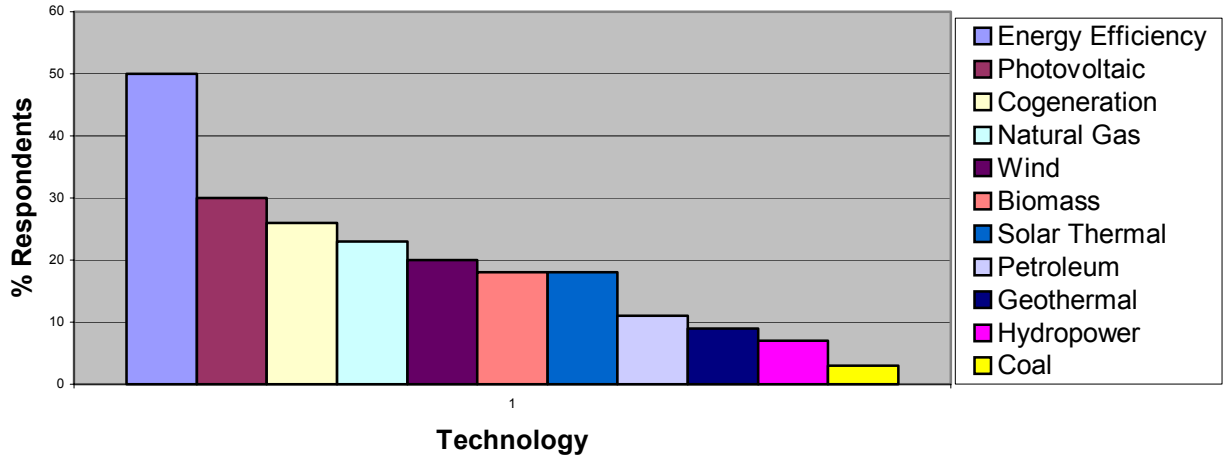
A – Industry Profile. In Part I of the questionnaire, respondents were asked to identify their business **activities**, the energy **technologies** most related to their business activities, and their **principal** business focus.

Over 40% of the respondents listed consulting as one of their business activities. In 2000, both engineering and consulting were listed by over 40% of the respondents. Chart 1 shows the various business activities the survey respondents are currently actively pursuing.



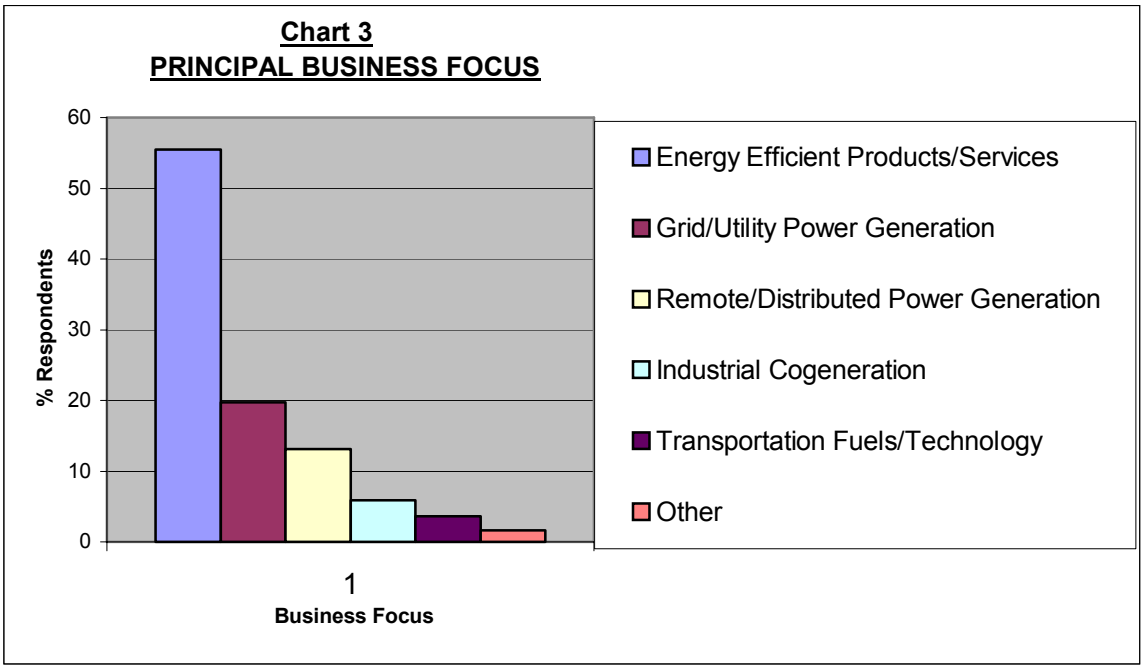
Over 50% of the respondents listed energy efficiency as one of their energy technologies. In 2000, energy efficiency, cogeneration, and natural gas were listed by over 40% of the respondents. Chart 2 displays the various technologies survey respondents are currently engaging.

Chart 2
ENERGY TECHNOLOGY



Over 55% of the respondent energy companies indicate their **principal** business focus is energy efficiency products/services (35% in 2000). Chart 3 displays the principal business focus of the survey respondents.

Chart 3
PRINCIPAL BUSINESS FOCUS



B – Employment and Revenue. In Part I of the survey, respondents were also asked to disclose their organization's total employment, location of employees, and approximate total gross revenue in 2002. Average total employment per organization was 384 employees (1341 in 2000), with a range from 1 to 39,000 (1-67,000 in 2000). Average total employment in California was 97 employees (99 in 2000), with a range from 1 to 10,000 (1-3,000 in 2000). Seventy-five percent (45% in 2000) of the respondents indicated they employee people in locations other than California. Over 80% of the companies have 50 or fewer employees (70 % in 2000). See chart 4 for total number of employees reported and the breakdown of employees working within and outside California.

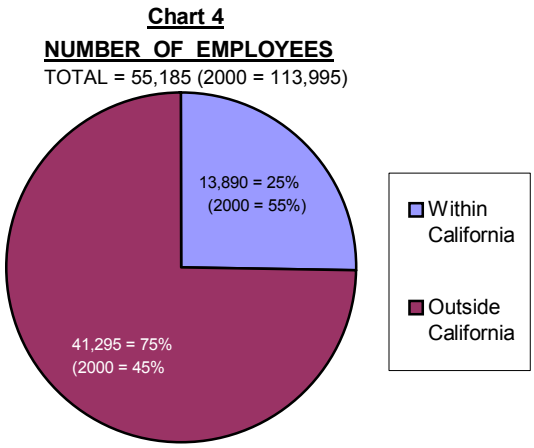
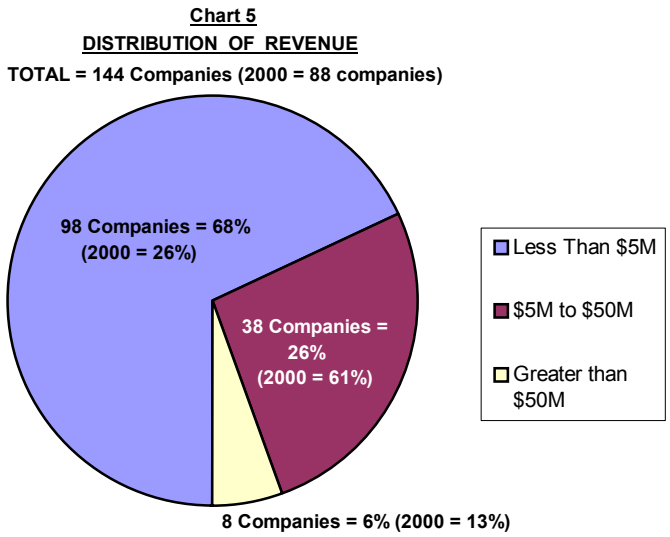


Chart 5 displays the distribution of total gross revenue for the respondent companies.



See Tab 8 for verbatim comments related to Industry Characteristics.

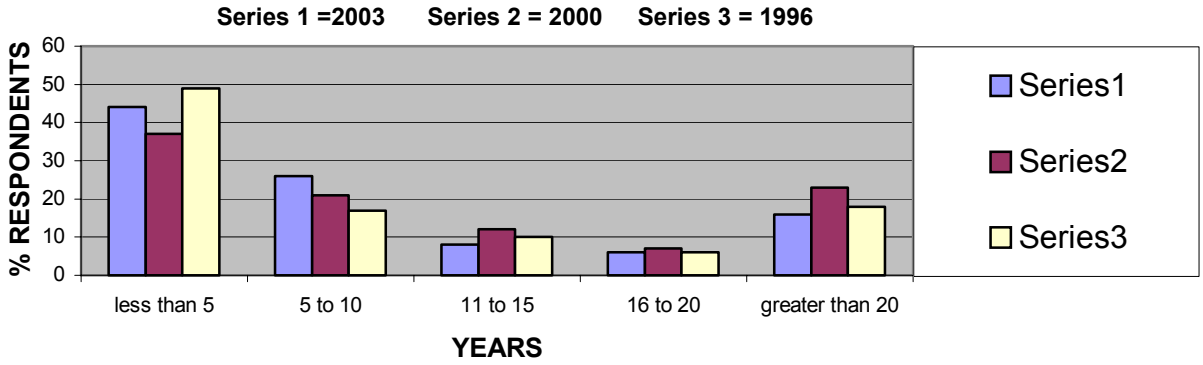
CALIFORNIA EXPORT ACTIVITIES

This section of the report provides an overview of the export experience of California energy companies. In addition, it provides insights into their expectations for future growth in export sales and revenues. This information came from 152 responding companies.

A - Exporting Experience. Sixty-eight percent of the respondents have exported during the last three years and 84% plan to export during the next three years. In 2000, these statistics were 81% and 90%. Of these companies, 44% have less than 5 years of exporting experience. This is up from 35% reported in 2000 but still lower that the 50% reported in the 1996 survey. On the other hand, 30% of the respondents have more than 10 years of exporting experience. This is down from 42% in 2000 but still lower than the 33% reported in the 1996 survey. These data indicate there are still two groups that will have significantly different needs as they attempt to reach export markets. These are the companies new to exporting and the companies that have been exporting for some time

Chart 6

YEARS EXPORTING

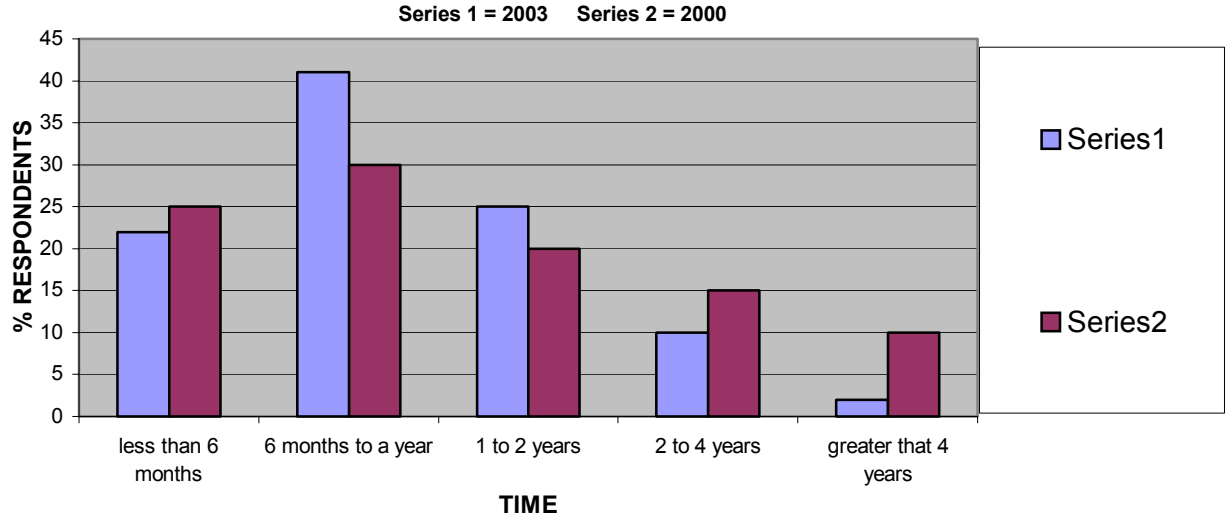


B - Expectations For Exporting. Survey respondents have high expectations for exporting. Eighty-four percent (90% in 2000) of the respondents plan to continue to export. Fifty-six percent (61% in 2000) of the companies indicated exports represented more than 5% of their previous year's gross revenue. Eighty-three percent (91% in 2000) of the respondents indicate gross revenue from exporting increased or was about the same in the previous year. Over the next three years, 70% (78% in 2000) of the companies expect their export revenue to grow at an annual rate of 10% or higher and 27% (30% in 2000) believe that exports will grow greater than 25% annually.

Survey respondents reported 61% (69% in 2000) of their organization's exports will come from private sources, 32% (31% in 2000) from public sources (foreign governments), and 7% from other sources (military, utilities, industrial).

When asked to estimate the timeframe needed to initiate and complete business deals in export markets, 63% (55% in 2000) indicated this could be accomplished in one year or less. Chart 7 displays the distribution of time frames.

Chart 7
TIME TO COMPLETE BUSINESS DEALS



See Tab 8 for verbatim comments related to California export activities.

INDUSTRY OUTLOOK

The information in this section of the report came from 152 responding companies.

The shift to competition in the U.S. electric power market continues to have an impact on company decisions to enter international markets. Fifty-six percent (50% in 2000) of the survey respondents indicated electricity restructuring in the U.S. has lead to increased domestic sales. Thirty-one percent (34% in 2000) of the companies responding indicated restructuring is causing them to consider selling in international markets and 41% (40% in 2000) indicated restructuring in the U.S. is causing them to consider new project development opportunities in international markets.

In terms of company buy-outs, 25% (38% in 2000) of the companies anticipate a buy-out of their company and of those, 8% (11% in 2000) expect it to be from a foreign entity while 68% (34% in 2000) expect it to be from a domestic buyer, and 24% (55% in 2000) do not know.

Over the next three years, companies see selling their products and services 76% (71% in 2000) domestically and 24% (29% in 2002) internationally.

Respondents were asked to rate eleven trends and their impact on company effort to conduct international business. The rating scale was from +2 (most positive impact) to 0 (no impact) to –2 (most negative impact). Chart 8 displays this information.

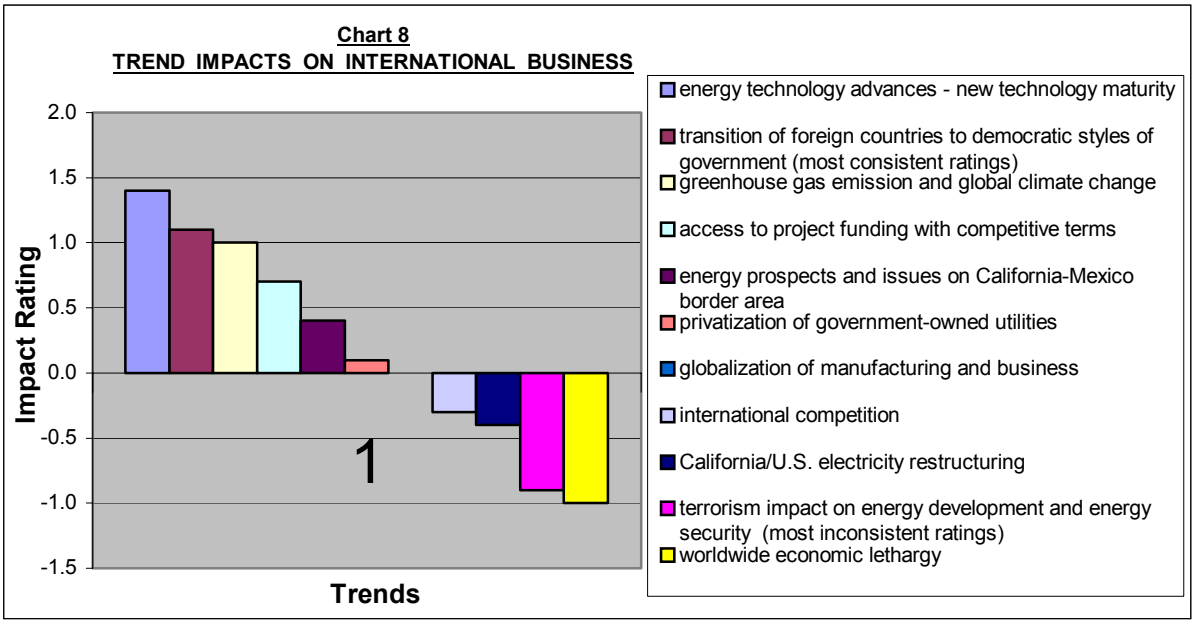


Chart 8 also introduces the statistical concept of "consistency." Note "transition of foreign countries to democratic styles of government" is shown in Chart 8 as having

"most consistent ratings." This means the individual ratings of this attribute from the 152 respondents show the least variation of the eleven attributes listed. The respondents' ratings can be said to be most consistent. That is, there is close agreement to that specific rating average.

On the other hand, "terrorism impact on energy development and energy security" provided the "most inconsistent ratings." This means the individual ratings of this attribute from the 152 respondents show the most variation of the eleven attributes listed. The respondents' ratings can be said to be most inconsistent. That is, there is wide disagreement to that specific rating average.

See Tab 8 for verbatim comments related to industry outlook.

CEC'S ENERGY TECHNOLOGY EXPORT PROGRAM ASSESSMENT

The information in this section of the report came from 152 responding companies.

This section deals with an assessment of CEC's Energy Technology Export Program (ETEP). Section A includes general assessment items that ETEP can influence and Section B covers assessment items specific to ETEP.

A – Export Program Assessment Items.

i. Export Program Activities Survey respondents were asked to rate how important 19 listed activities are to their company and how satisfied their company is with recent results of each of the activities (performance). A scale of 1-5, with 5 being extremely important or extremely satisfied and 1 being extremely unimportant or extremely dissatisfied was used. This information enabled the ranking of the 19 listed activities in order of importance to the companies and their perceptions of performance. More importantly, it provides the opportunity for "Gap Analysis", the difference between importance and performance, which is normally a better method to prioritize activities for improvement. See Tab 4 for a more detailed explanation of this methodology.

The importance, performance, and gap rankings are shown in Table 1 and Chart 9 below. The three rankings are averages of all individual responses. In addition to the averages, variation of individual responses is also important, as it is a measure of the consistency of the responses. Most consistent and inconsistent activities are noted in Table 1 and Chart 9.

To demonstrate how Gap Analysis can be used to prioritize activities for improvement, please refer to the data in Table 1 on the following two pages. One way to prioritize and select activities for improvement would be to select activities with low Performance (P) ratings. That approach suggests "project facilitation support", "financing advisory support", and "reverse trade missions" as the activities to improve. Gap analysis supports the first two. However, because the activity "reverse trade missions" has a low Importance (I) rating (the lowest of all 19 activities), it has a very low Gap. This shows that Gap Analysis is often a better method of prioritizing activities for improvement than merely looking at importance or performance rankings. Perhaps studying all three rankings provides even better insight than any one of the rankings. Of course, improvement costs for the various activities are also a deciding factor in planning program improvements.

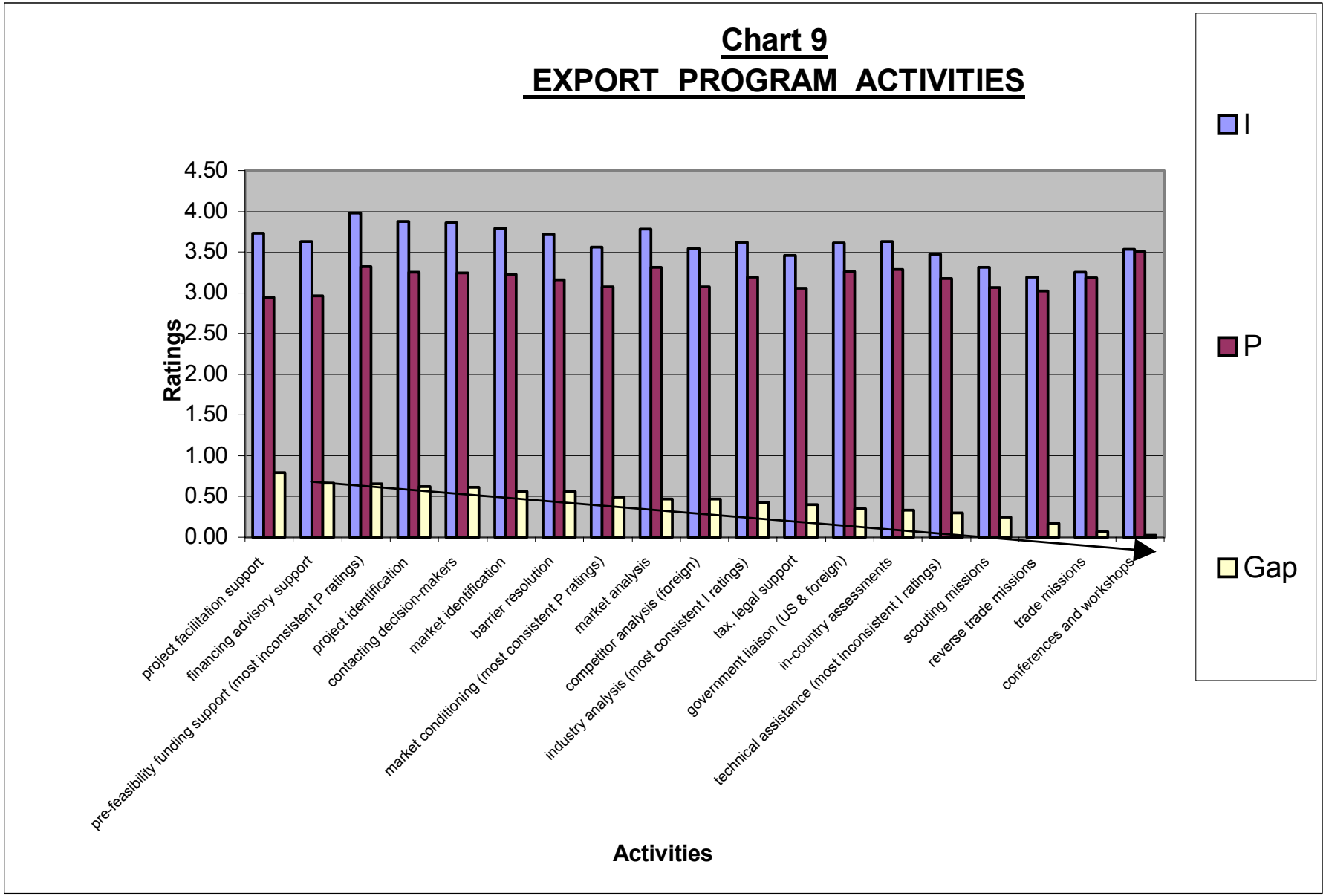
Table 1: Importance (I), Performance (P), and Gap Rankings: EXPORT PROGRAM ACTIVITIES – 152 Responding Companies

ACTIVITY	I	P	GAP
pre-feasibility funding	3.98		
project identification	3.88		
contacting decision-makers	3.86		
market identification	3.79		
market analysis	3.79		
project facilitation support	3.74		
barrier resolution	3.72		
financing advisory support	3.63		
in-country assessments	3.63		
Industry analysis **(most consistent I ratings)**	3.62		
government liaison (US & foreign)	3.61		
market conditioning	3.56		
competitor analysis (foreign)	3.54		
conferences and workshops	3.54		
technical assistance **(most inconsistent I ratings)**	3.48		
tax, legal support	3.46		
Scouting missions	3.31		
trade missions	3.26		
reverse trade missions	3.19		
conferences and workshops		3.51	
pre-feasibility funding support **(most inconsistent P ratings**)		3.32	
market analysis		3.32	
In-country assessments		3.29	
government liaison (US & foreign)		3.26	
project identification		3.26	
contacting decision-makers		3.25	
market identification		3.23	
Industry analysis		3.19	
trade missions		3.19	
technical assistance		3.18	
barrier resolution		3.16	
competitor analysis (foreign)		3.07	
market conditioning **(most consistent P ratings**)		3.07	
Scouting missions		3.06	
tax, legal support		3.06	
reverse trade missions		3.02	
financing advisory support		2.96	
project facilitation support		2.95	

ACTIVITY	**I**	**P**	**GAP**
project facilitation support	3.74	2.95	0.79
financing advisory support	3.63	2.96	0.66
pre-feasibility funding support **(most inconsistent P ratings)**	3.98	3.32	0.65
project identification	3.88	3.26	0.62
contacting decision-makers	3.86	3.25	0.61
market identification	3.79	3.23	0.56
barrier resolution	3.72	3.16	0.56
market conditioning (**most consistent P ratings)**	3.56	3.07	0.49
market analysis	3.79	3.32	0.47
competitor analysis (foreign)	3.54	3.07	0.47
Industry analysis **(most consistent I ratings)**	3.62	3.19	0.43
tax, legal support	3.46	3.06	0.40
government liaison (US & foreign)	3.61	3.26	0.35
in-country assessments	3.63	3.29	0.34
technical assistance **(most inconsistent I ratings)**	3.48	3.18	0.30
Scouting missions	3.31	3.06	0.25
reverse trade missions	3.19	3.02	0.17
trade missions	3.26	3.19	0.07
conferences and workshops	3.54	3.51	0.03

NOTE: consistency and inconsistency ratings are determined by lowest or highest standard deviations.

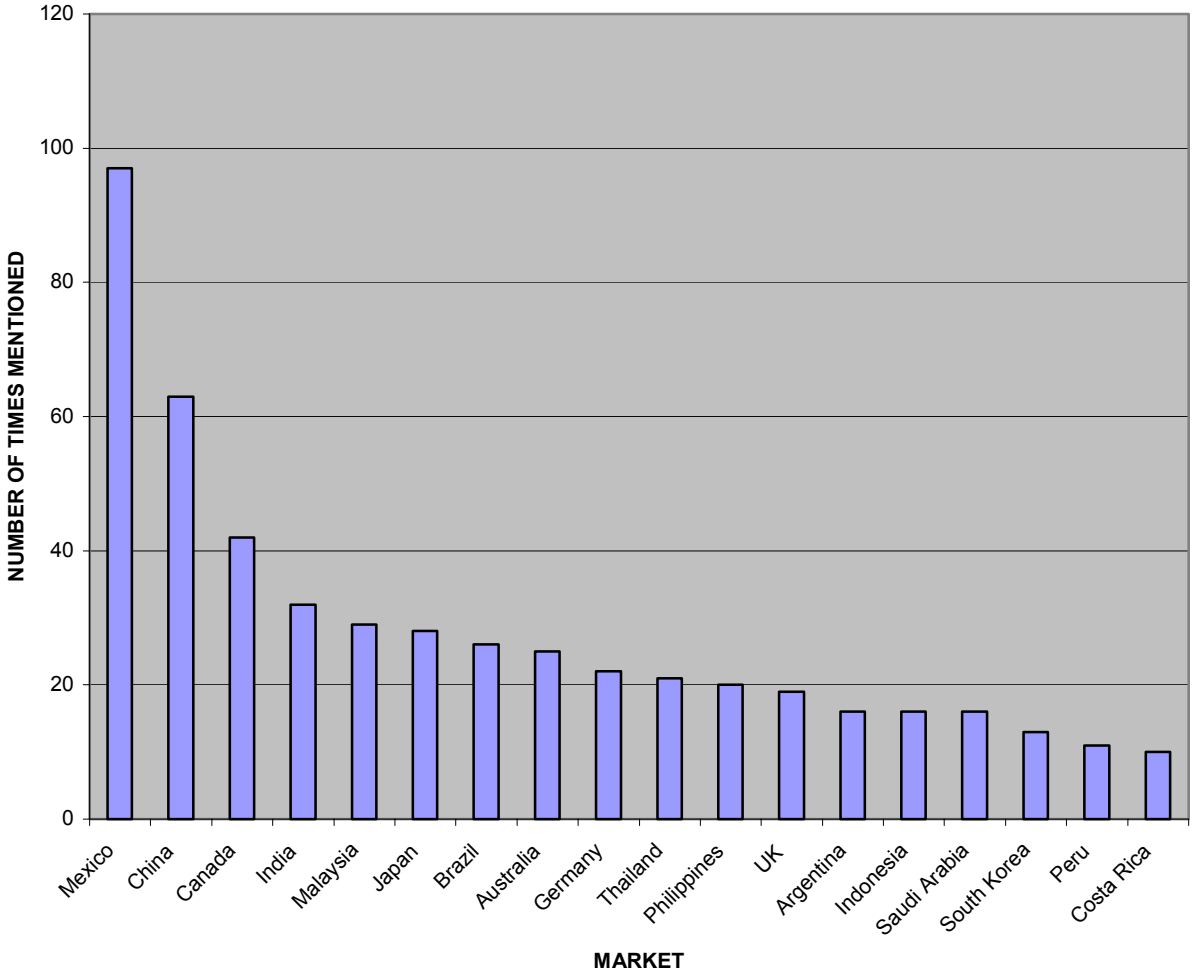
Chart 9
EXPORT PROGRAM ACTIVITIES



ii. Achieving Growth One of the key questions that companies are trying to answer is: Where is international growth occurring? This section identifies the regions, countries, and activities that California companies feel will provide them with excellent exporting opportunities in the future.

Survey respondents were asked to select one to six countries important to their future export goals and indicate project opportunity types in the countries selected. Ninety-five countries/regions were mentioned 754 times. Countries mentioned most frequently are shown in chart 10. These 18 countries (19% of all the countries mentioned) represent 67% of the 754 times the 95 countries were mentioned.

Chart 10
INTERNATIONAL MARKET RANKINGS



All of the countries mentioned by respondents as important to their future export goals were collated by energy categories. These are shown on the following three pages.

COUNTRY MARKETS

(by Energy Category & Number of Company Responses)

Biomass	
Mexico	10
China	6
Malaysia	4
Bangladesl	3
Indonesia	3
Thailand	3
Canada	2
India	2
Brazil	1
Burma	1
Canada	1
Chili	1
Columbia	1
Germany	1
Guatemala	1
Hong Kong	1
Hungary	1
Japan	1
Mid East	1
Pakistan	1
Peru	1
Qatar	1
Saudi Arab	1
South Kore	1
Taiwan	1
Ukraine	1
United Aral	1
Vietnam	1
TOTAL	53

Coal	
China	3
Australia	2
Canada	1
Indonesia	1
South Kore	1
Taiwan	1
UK	1
TOTAL	10

Cogeneration	
Mexico	14
China	12
Malaysia	7
Canada	6
Japan	6
Brazil	5
India	5
Thailand	5
Australia	4
Saudi Arab	4
Philippines	3
Bangladesl	2
Egypt	2
Germany	2
Indonesia	2
South Kore	2
UK	2
Argentina	1
Cambodia	1
Chili	1
Columbia	1
Costa Rica	1
Equatorial	1
Europe	1
Far East	1
Greece	1
Guatemala	1
Hong Kong	1
Hungary	1
Kuwait	1
Marshall Is	1
Pakistan	1
Peru	1
Poland	1
Puerto Rico	1
Qatar	1
Samoa	1
South Afric	1
South Ame	1
Taiwan	1
Tonga	1
Turkey	1
Ukraine	1
United Aral	1
Venezuela	1
Vietnam	1
TOTAL	112

Energy Efficiency	
Mexico	22
China	15
Canada	11
UK	9
Australia	7
India	7
Japan	6
Brazil	5
Germany	5
Thailand	5
Malaysia	4
South Afric	4
France	3
Greece	3
South Kore	3
Spain	3
Afghanistar	2
Argentina	2
Costa Rica	2
Egypt	2
Hong Kong	2
Indonesia	2
Italy	2
Poland	2
Saudi Arab	2
Turkey	2
Albania	1
Algeria	1
Andorra	1
Antigua An	1
Asia	1
Bahamas	1
Bahrain	1
Bangladesl	1
Belgium	1
Cuba	1
Guatemala	1
Iceland	1
Iran	1
Iraq	1
Ireland	1
Israel	1
Kuwait	1
Marshall Is	1
New Zealar	1
Nigeria	1
Peru	1
Puerto Rico	1
Samoa	1
Singapore	1
South Ame	1
Switzerlanc	1
Taiwan	1
Tonga	1
Venezuela	1
Vietnam	1
TOTAL	162

COUNTRY MARKETS

(by Energy Category & Number of Company Responses)

Geothermal	
Philippines	5
Indonesia	3
Malaysia	3
Mexico	3
Canada	2
China	2
El Salvado	2
Japan	2
Nicaragua	2
Saudi Arat	2
Andorra	1
Angola	1
Argentina	1
Brazil	1
Bulgaria	1
Cezch Rep	1
Honduras	1
Kuwait	1
Peru	1
Qatar	1
South Ame	1
South Kore	1
Taiwan	1
Thailand	1
UK	1
United Ara	1
TOTAL	42

Hydropower	
Brazil	2
Philippines	2
Canada	1
China	1
Germany	1
Indonesia	1
Israel	1
Japan	1
Malaysia	1
Mexico	1
Peru	1
Scotland	1
Andorra	1
Angola	1
Argentina	1
Bulgaria	1
Czech Rep	1
TOTAL	19

Natural Gas	
Mexico	11
Canada	8
China	6
India	6
Philippines	5
Malaysia	4
Australia	3
Saudi Arat	3
Argentina	2
Brazil	2
South Kore	2
Thailand	2
Taiwan	2
Bahrain	1
Banglades	1
Europe	1
Far East	1
Germany	1
Greece	1
Indonesia	1
Japan	1
Kuwait	1
Marshall Is	1
Peru	1
Poland	1
Puerto Ric	1
Qatar	1
Russia	1
Samoa	1
South Afric	1
South Ame	1
Tonga	1
Turkey	1
UK	1
United Ara	1
Venezuela	1
Vietnam	1
TOTAL	80

Petroleum	
China	6
Mexico	3
Philippines	3
Saudi Arat	3
Australia	2
India	2
Japan	2
Malaysia	2
South Kore	2
Thailand	2
Canada	1
Indonesia	1
Kuwait	1
Peru	1
Quatar	1
Russia	1
Syria	1
Taiwan	1
UAE	1
United Ara	1
Venezuela	1
Vietnam	1
TOTAL	39

COUNTRY MARKETS

(by Energy Category & Number of Company Responses)

Photovolactic	
Mexico	14
China	6
Japan	6
Brazil	4
Germany	4
India	4
Australia	3
Canada	3
Nigeria	3
Peru	3
Andorra	2
Argentina	2
Bolivia	2
Chile	2
Costa Rica	2
Egypt	2
Equatorial	2
Ghana	2
Thailand	2
UK	2
Afghanista	1
Albania	1
Algeria	1
Angola	1
Antigua An	1
Argentina	1
Banglades	1
Bonkira	1
Bulgaria	1
Chad	1
Cuba	1
Czech Rep	1
Fiji	1
France	1
Guatemala	1
Hong Kong	1
Indonesia	1
Israel	1
Italy	1
Ivory Coas	1
Malaysia	1
Mid East	1
Niger	1
Norway	1
Poland	1
Scotland	1
South Afric	1
South Ame	1
Togo	1
Yemen	1
TOTAL	100

Solar Thermal	
Mexico	7
China	4
India	4
Argentina	3
Brazil	3
Canada	3
Australia	2
Chile	2
Nigeria	2
Africa	1
Andorra	1
Angola	1
Bolivia	1
Bulgaria	1
Caribbean	1
Costa Rica	1
Czech Rep	1
Ethiopia	1
Europe	1
Fiji	1
Ghana	1
Indonesia	1
New Zeala	1
Peru	1
Poland	1
South Afric	1
UK	1
Vietnam	1
TOTAL	49

Wind	
Mexico	12
Argentina	3
Brazil	3
Canada	3
Germany	3
Japan	3
Malaysia	3
Andorra	2
Australia	2
China	2
Costa Rica	2
Ghana	2
India	2
Italy	2
Philippines	2
UK	2
Afghanista	1
Albania	1
Algeria	1
Angola	1
Antigua An	1
Bolivia	1
Bulgaria	1
Chad	1
Chile	1
Czech Rep	1
Fiji	1
France	1
Greece	1
Ireland	1
Israel	1
Ivory Coas	1
Kuwait	1
Latin Amer	1
Marshall Is	1
New Zeala	1
Nicer	1
Nigeria	1
Saudi Arab	1
Scotland	1
Seychelles	1
Slovakia	1
South Afric	1
South Ame	1
South Kore	1
Thailand	1
Togo	1
Turkey	1
TOTAL	80

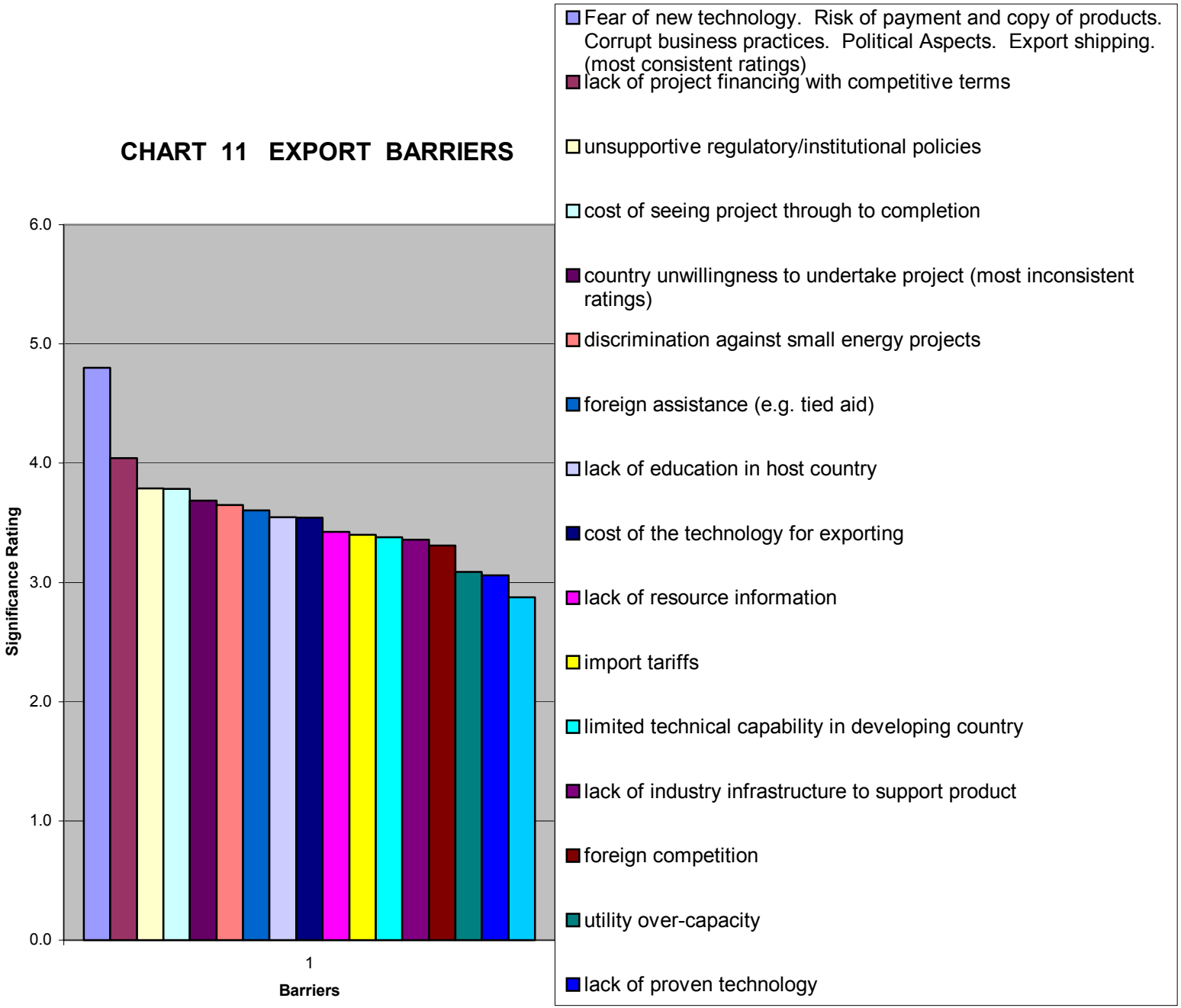
Table 2: The following matrix shows how many of the potential energy source projects are listed in the 18 key countries by all respondents.

1. Independent Power Production
2. Energy efficiency
3. Onsite Cogeneration
4. Remote Power
5. Energy Balance of System Components
6. Oil/Gas Exploration and Production
7. Transportation Fuels/Technology
8. Transmission and Distribution Technology

	1	2	3	4	5	6	7	8	TOTAL
Mexico	20	14	12	11	6	3	3	1	70
Canada	8	8	3	3	3	3	1	0	29
Philippines	6	3	5	5	1	4	1	2	27
Malaysia	5	4	6	2	2	1	1	0	21
India	3	5	2	5	2	1	2	0	20
Thailand	3	5	5	1	3	1	1	1	20
Japan	4	4	2	1	1	1	4	1	18
UK	4	3	1	1	3	0	2	1	15
Indonesia	4	3	0	2	1	2	1	0	13
Australia	3	3	2	1	2	1	0	0	12
Germany	3	4	1	1	2	0	1	0	12
Brazil	2	3	3	2	0	0	0	0	10
China	2	4	2	0	0	1	0	0	9
SaudiArabia	2	1	2	1	1	2	0	0	9
Argentina	1	3	1	2	0	1	0	0	8
Peru	2	0	2	2	0	0	1	0	7
S. Korea	1	2	1	0	2	0	0	0	6
Costa Rica	2	1	1	0	0	0	0	0	4
TOTAL	75	70	51	40	29	21	18	6	310

iii. Exporting Barriers Respondents were asked to identify the barriers that exist for California firms in international markets. A list of sixteen barriers was provided. In addition, respondents were asked to provide their own barriers. The most significant export barrier was "Other: Fear of new technology, Risk of payment and copy of products, corrupt business practices, Political aspects, Export shipping". Chart 11 shows the relative rankings of the barriers provided.

CHART 11 EXPORT BARRIERS



B – Assessment Items Specific to ETEP

The information in this part of the report, sections I and ii, came from the 19 companies (13 in 2002) that have been involved in ETEP activities; the information in sections iii and iv came from all 152 responding companies.

i. General. Fifteen percent (14% in 2000) of the response group have been involved in ETEP activities. When asked the status of project development initiatives that have been supported by ETEP funding or ETEP staff:

- 44% (27% in 2000) indicated other (scoping, one complete project, one project ongoing),
- 22% had detailed contract work in progress (not fully negotiated),
- 17% (55% in 2000) indicated they had Memorandum of Understanding/letters of interest by foreign entities (preliminary stages), and
- 17% (18% in 2000) had all agreements signed/contract finalized (revenue is flowing)

Companies were also asked to identify the percent of their 2001-02 export sales/revenues related to ETEP activities. Responding companies indicated that 25% (39% in 2000) of their revenues were related to ETEP activities with a dollar value of $27,830,000 ($50,205,000 in 2000). One company, #43 reported their value of sales/revenue attributable to ETEP involvement is $25,000,000. The nature of these export sales are from project development 35% (33% in 2000), contract for service 29% (56% in 2000), equipment sales 24% (11% in 2000), turnkey operation (6%), and other (6%).

A key aspect of ETEP is to link potential buyers and sellers. Or, at least, provide companies with the opportunity to make new international business contacts. Respondents indicated forty-three ETEP activities resulted in new international business contacts. Sixty-five percent of the respondents (62% in 2002) indicated that involvement with ETEP increased international business contacts. The remainder of the respondents indicated no change.

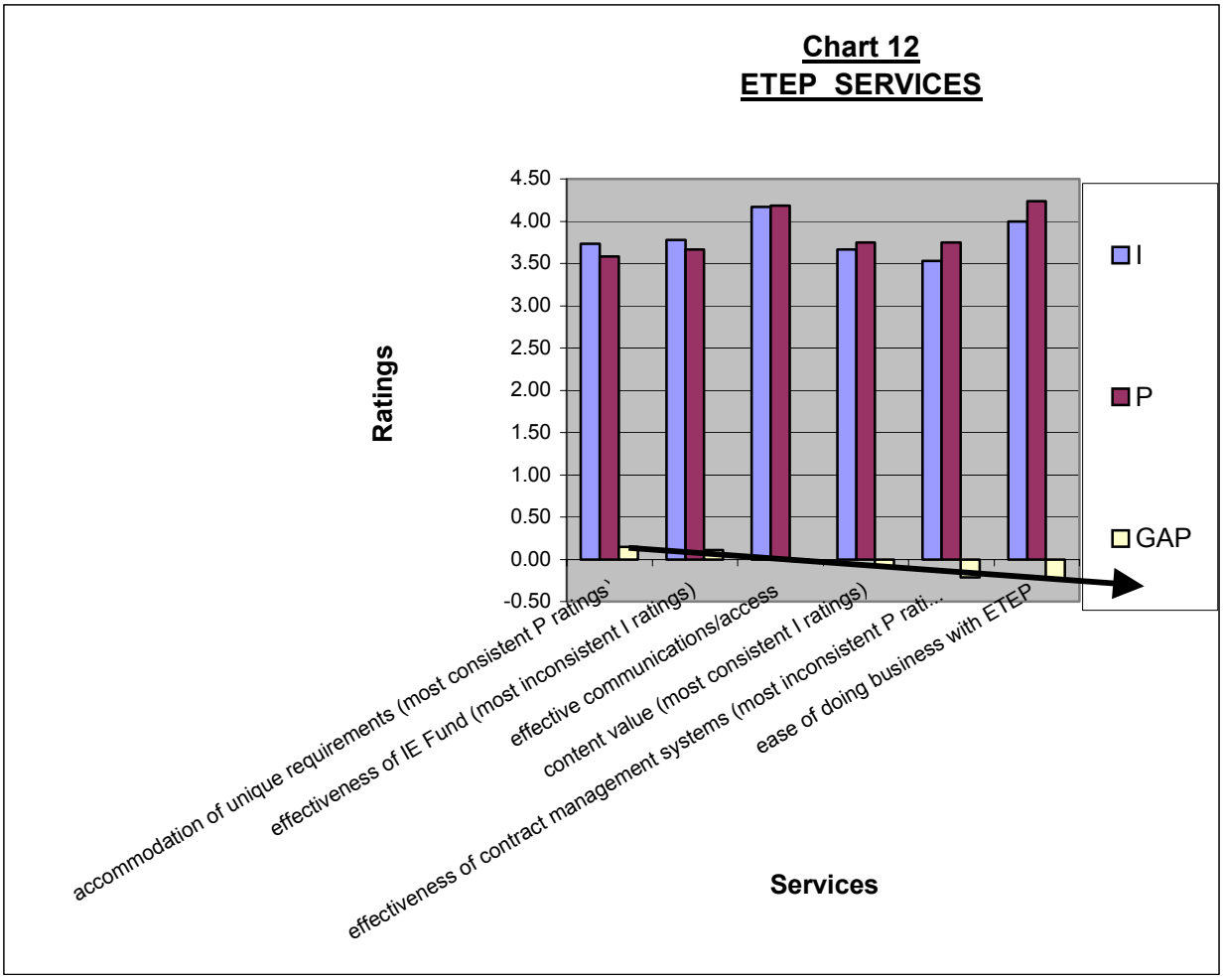
Another key aspect of ETEP is to provide new export knowledge to companies that do not have the resources or the where-with-all to know key aspects of exporting. ETEP also provides information to companies that are successful exporters but need additional information to consummate a contract. Fifty-nine percent (67% in 2000) of the respondents indicated their knowledge of export market opportunities has increased due to their involvement in ETEP activities.

ii. ETEP Services. Respondents were asked to rate ETEP's service to clients in six categories. The service categories, importance, performance, and gap rankings are shown in Table 3 and Chart 12 on the next page.

Table 3: Importance (I), Performance (P), and Gap Rankings: ETEP SERVICES – 13 Responding Companies

Service	I	P	GAP
effective communications/access	4.17		
ease of doing business with ETEP	4.00		
effectiveness of International Energy Fund **(most inconsistent I ratings)**	3.78		
accommodation of unique requirements	3.73		
content value **(most consistent I ratings)**	3.67		
effectiveness of contract management systems	3.53		
ease of doing business with ETEP		4.24	
effective communications/access **(most inconsistent P ratings)**		4.19	
effectiveness of contract management systems		3.75	
content value		3.75	
effectiveness of International Energy Fund		3.67	
accommodation of unique requirements **(most consistent P ratings)**		3.58	
accommodation of unique requirements **most consistent P ratings)**	3.73	3.58	0.15
effectiveness of International Energy Fund **(most inconsistent I ratings)**	3.78	3.67	0.11
effective communications/access **(most inconsistent P ratings)**	4.17	4.19	-0.02
content value **(most consistent I ratings)**	3.67	3.75	-0.08
effectiveness of contract management systems	3.53	3.75	-0.22
ease of doing business with ETEP	4.00	4.24	-0.24

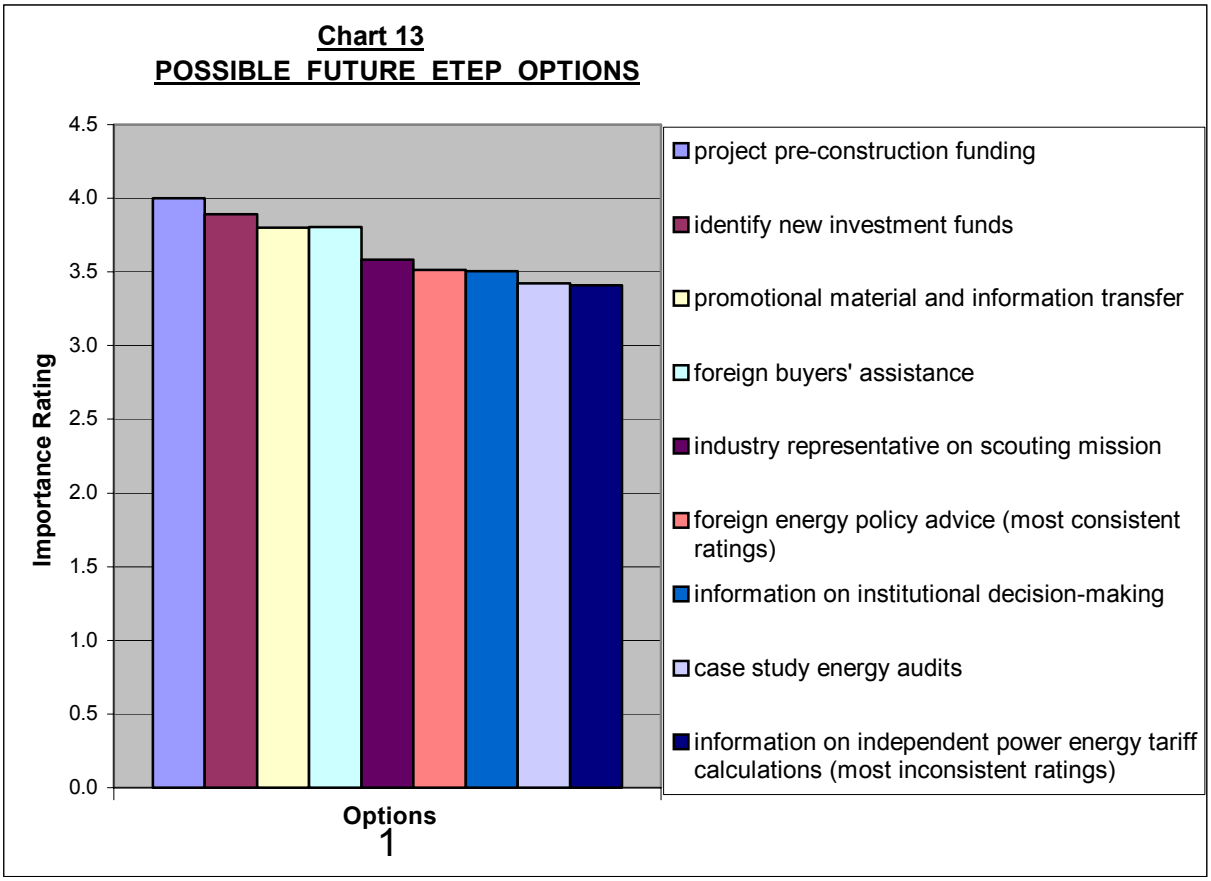
Because the gaps are so small (less than 1) and four of them are negative (surpassing expectations) service is excellent, as reported by the respondents. Additional improvements could be made. However, with limited resources it is better to put staff resources elsewhere.



The CEC's Geothermal Resource Development Account (GRDA) currently funds domestic geothermal projects each year. Geothermal respondents were asked what percentage of the annual funding they would support to assist California geothermal companies in International projects. The responses are as follows:

% of the GRDA that would be supported to assist California Geothermal Companies in International projects	**Geothermal Companies Responding**		
%		**Number**	**%**
0		5	46
10		1	9
30		3	27
0		0	0
other		2	18
	TOTAL	11	100

iii. Options. Industry respondents were provided a list of future options that ETEP might implement. The results of those ratings are contained in Chart 13.



Respondents were asked to list other programs or activities they feel CEC/ETEP should consider in the future. These are listed in Tab 8.

iv. ETEP Overall Rating. The final questionnaire statement asked the respondents to rate the following from 5 (strongly agree) to 1 (strongly disagree):

> **The active support and involvement of the Energy Technology Export Program is important to increasing California's energy industry exports.**

The average rating from respondents to this statement was **3.8**.

Please see Tab 8 for additional verbatim comments received from the respondents.

A copy of the questionnaire is included in Tab 9.

SURVEY BREAK OUT GROUPS

Whereas the report thus far has concentrated on information received from all 152 survey respondents, this section analyzes similarities and differences in three major categories: company size, as measured by total gross revenue; business activities, as reported by all respondents; and energy technologies, most related to primary business activities.

A – Introduction. This year's ETEP's Industry Assessment Survey includes analysis of key data, findings (similarities and differences), and conclusions for break-out groups listed in the sampling plan below.

All 152 respondents are included in the three Gross Revenue break out groups listed below (Small, Medium, and Large). All respondents that indicated involvement in the three listed Business Activities are included in those three break out groups (Engineering, Manufacturing, and Project Development). The three Business Activities listed are three of the four largest activities for all 152 firms responding. All respondents that indicated involvement with the three listed Energy Technologies are included in those three break out groups (Energy Efficiency, Photovoltaic, and Cogeneration). The three Energy Technologies listed are the three largest Energy Technologies for all 152 firms responding.

B – Sampling Plan. The following nine break out groups were analyzed:

	Number of Firms
I. By Total Gross Revenue in 2002	
1. Under $5,000,000 (Small)	98
2. $5,000,000 to $50,000,000 (Medium)	38
3. Over $50,000,000 (Large)	8
II. By Business Activity	
4. Engineering (Engin)	55
5. Manufacturing (Mfg)	51
6. Project Development (PD)	44
III. BY Technologies	
7. Energy Efficiency (EE)	76
8. Photovoltaic (Photo)	45
9. Cogeneration (Cogen)	40

C – Findings.

Statistically significant differences in attribute ratings between the individual break out groups and the 192 total respondent firms listed in the findings were determined by statistical analysis of sample averages for Trends, ETEP Program Activities, Exporting Barriers, and ETEP Potential Options. Student's t distribution was used for this analysis at a 1% error rate. That is, there is a 99% probability that differences shown are significant (special causes of variation of the data) and not just part of the common causes of variation.

I. Types of Projects

Whereas the private/public breakdown of projects runs about 61%/32% for the 152 respondents and most of the break out groups, the private/public breakdown of projects for break out group 2 (the 8 largest firms) runs a significantly different 30%/67%. The breakdown for all nine break out groups are:

Group	Private (%)	Public (%)	Other (%)
152 respondents (base)	61	32	7
Small Firms	**59 L**	33	**8 H**
Medium Size Firms	**68 H**	**24 L**	8
Large Firms	**30 L**	**67 H**	**3 L**
Engineering Firms	59	34	7
Manufacturing Firms	59	32	**9 H**
Project Development Firms	61	32	7
Energy Efficiency Firms	**64 H**	**29 L**	7
Photovoltaic Firms	58	**36 H**	6
Cogeneration Firms	**66 H**	**22 L**	**12 H**

Notes:

1. Numbers in **bold** are statistically significantly different than the 152 responses.
2. **H** and **L** indicate the responses are higher or lower than the 152 responses.
3. Break out group ratings not bold are not statistically different than the 152 responses.

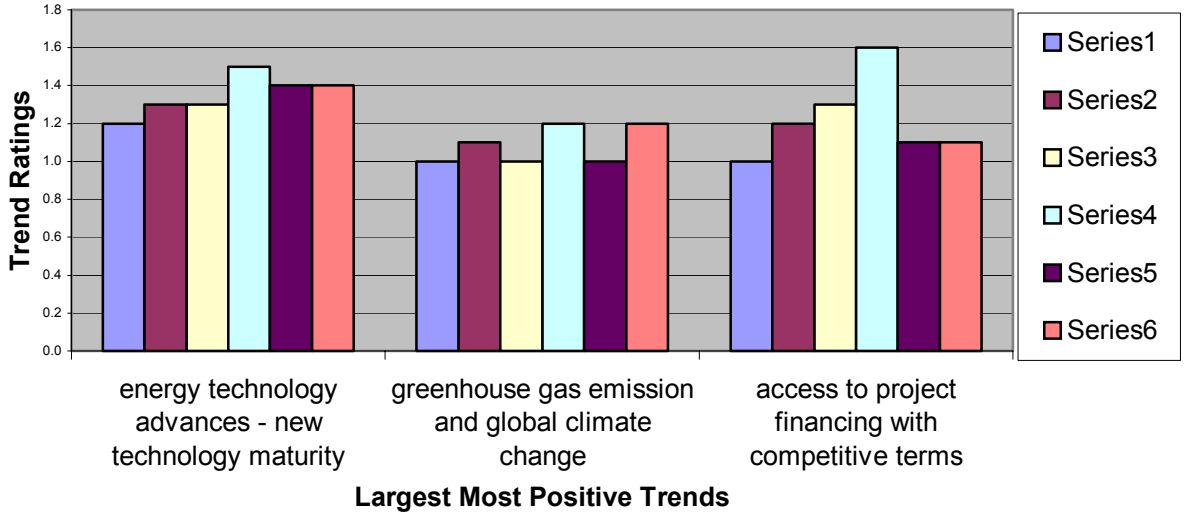
II. Trends

In comparison to total respondents, the Small, Engineering, Project Development, Energy Efficient, and Photovoltaic break out groups evaluated most trends as having more positive impact on efforts to conduct international business. The largest and most positive trends for total respondents and these five break out groups are shown in Chart 14 below.

The Medium break out group evaluated most trends as having less positive impact than total respondents on efforts to conduct international business.

The Large break out group indicated most trends have about the same impact on efforts to conduct international business when compared to the results indicated by total respondents. However, the Large break out group evaluated "worldwide economic lethargy" as having a statistically significantly larger negative impact on efforts to conduct international business

CHART 14 TREND IMPACT ON DOING BUSINESS



Series 1 = 152 Firms Series 2 Small Firms Series 3 = Engineering Firms

Series 4 = Project Development Firms Series 5 = Energy Efficiency Firms Series 6 = Photovoltaic Firms

Statistically significant and insignificant differences in trends impacting efforts to conduct international business by all nine break out groups are shown on the following page.

TRENDS - ALL RESPONDENTS (152) AND BREAK OUT GROUPS

Statistically Significant and Insignificant **Differences**

TRENDS		BREAK OUT GROUPS								
			Size			Activity			Technology	
		Small	Medium	Large	Engin	Mfg	PD	EE	Photo	Cogen
	Number of Firms Responding Total: 152	98	38	8	55	51	44	76	45	40
energy technology advances - new technology maturity	1.2 sd = 0.94	**1.3 H**	**0.9 L**	1.5	**1.3 H**	1.2	**1.5 H**	**1.4 H**	**1.4 H**	**1.0 L**
greenhouse gas emission and global climate change	1.0 sd = 1.00	**1.1 H**	**0.7 L**	0.4	1.0	**0.8 L**	**1.2 H**	1.0	**1.2 H**	**0.8 L**
access to project financing with competitive terms	1.0 sd = 1.12	**1.2 H**	**0.7 L**	1.5	**1.3 H**	**1.1 H**	**1.6 H**	**1.1 H**	1.1	**0.9 L**
transition of foreign countries to democratic styles of government **(most consistent ratings)**	0.8 sd = **0.89**	0.8	**0.7 L**	1.1	**0.9 H**	**0.9 H**	**0.9 H**	**0.7 L**	0.7	**0.9 H**
privatization of government-owned utilities	0.6 sd = 1.17	**0.7 H**	**0.4 L**	0.9	**0.8 H**	**0.5 L**	**0.8 H**	**0.8 H**	0.7	**0.8 H**
energy prospects and issues on California-Mexico border area	0.5 sd = 1.02	0.4	**0.6 H**	0.3	0.4	0.4	**0.2 L**	**0.1 L**	**0.3 L**	0.5
globalization of manufacturing and business	0.4 sd = 1.13	**0.6 H**	**0.0 L**	0.9	**0.5 H**	0.5	**0.8 H**	**0.5 H**	**0.7 H**	**0.6 H**
California/U.S. electricity restructuring	0.3 sd = 1.22	**0.4 H**	**0.1 L**	0.3	0.3	0.3	**0.4 H**	0.3	**0.7 H**	**0.1 L**
terrorism impact on energy development and energy security **(most inconsistent ratings)**	0.0 sd = **1.28**	**0.2 H**	**-0.4 L**	1.4	0.0	**0.3 H**	**0.3 H**	**0.1 H**	**0.4 H**	**-0.2 L**
international competition	-0.4 sd = 0.98	**-0.3 H**	**-0.5 L**	-0.3	**-0.5 L**	**-0.6 L**	**-0.5 L**	0.0	0.0	**-0.5 L**
worldwide economic lethargy	-0.9 sd = 1.03	**-0.8 H**	**-1.0 L**	**-1.5 L**	**-1.0 L**	**-0.6 H**	**-1.0 L**	**-0.8 H**	**-1.1 L**	**-1.0 L**

NOTES:

1. The rating scale measures impact of trends in efforts to conduct international business.
2. The rating scale ranges from 2: most positive impact to 0: no impact to -2: most negative impact.
3. **Bold** numbers are statistically significantly different than the responses of the 152 total survey respondents.
4. **H** indicates results statistically significantly higher than 152 respondents' results. **L** indicates results statistically significantly lower than 152 respondents' results.
5. Non-bold numbers in the Size, Activity, and Technology columns indicate results are not statistically significantly different than those of the 152 respondents.

III. ETEP Activities

Gap analysis was conducted on ETEP's export program activities for each of the nine break out groups. Importance (I) and Performance (P) rating were compared to total respondent ratings and significant differences were calculated. The analysis indicated that significant differences exist except in break out group 3 (Large Companies), where none of the I and P results were significantly different than the total respondent ratings. Other patterns emerged and are discussed below. Gaps range from slightly negative to just over 1.0, indicating most firms' expectations are being met.

TABLE 4 – GAP ANALYSIS

Importance (I), Performance (P), and Gap Rankings
98 companies - Gross Revenue Less than $5M (Small)

EXPORT PROGRAM ACTIVITIES

	I	P	Gap
financing advisory support	**3.87 H**	**2.71 L**	1.16
project facilitation support	**3.87 H**	**2.78 L**	1.09
pre-feasibility funding support **(most inconsistent P ratings)**	**4.17 H**	**3.14 L**	1.03
project identification	3.86	**3.08 L**	0.78
market identification	3.75	**2.97 L**	0.78
barrier resolution	**3.77 H**	**3.03 L**	0.74
industry analysis	3.65	**2.92 L**	0.73
in-country assessments	**3.73 H**	**3.03 L**	0.70
market analysis	3.75	**3.06 L**	0.69
competitor analysis (foreign)	**3.63 H**	**2.94 L**	0.69
tax, legal support	**3.55 H**	**2.86 L**	0.69
government liaison (US & foreign)	**3.79 H**	**3.17 L**	0.62
scouting missions **(most consistent P ratings)**	**3.50 H**	**2.93 L**	0.57
market conditioning	**3.58 H**	3.03	0.55
contacting decision-makers	3.89	**3.35 H**	0.54
technical assistance	3.51	**3.00 L**	0.51
reverse trade missions	**3.40 H**	3.00	0.40
conferences and workshops **(most consistent I ratings)**	**3.69 H**	**3.38 L**	0.31
trade missions **(most inconsistent I ratings)**	**3.47 H**	**3.30 H**	0.17

NOTES:

1. The data is ranked from high to low on the basis of Gap size.
2. **Bold** numbers indicate averages are statistically significantly different than total population ratings.
3. **L** and **H** indicates ratings are lower or higher than total population equivalents.

For the Small firms, Importance (I) ratings of Export Program Activities tend to be significantly higher than for total respondents and Performance (P) ratings tend to be lower. **This indicates smaller firms need additional help from ETEP.**

CHART 15
EXPORT PROGRAM ACTIVITIES - 98 SMALL COMPANIES

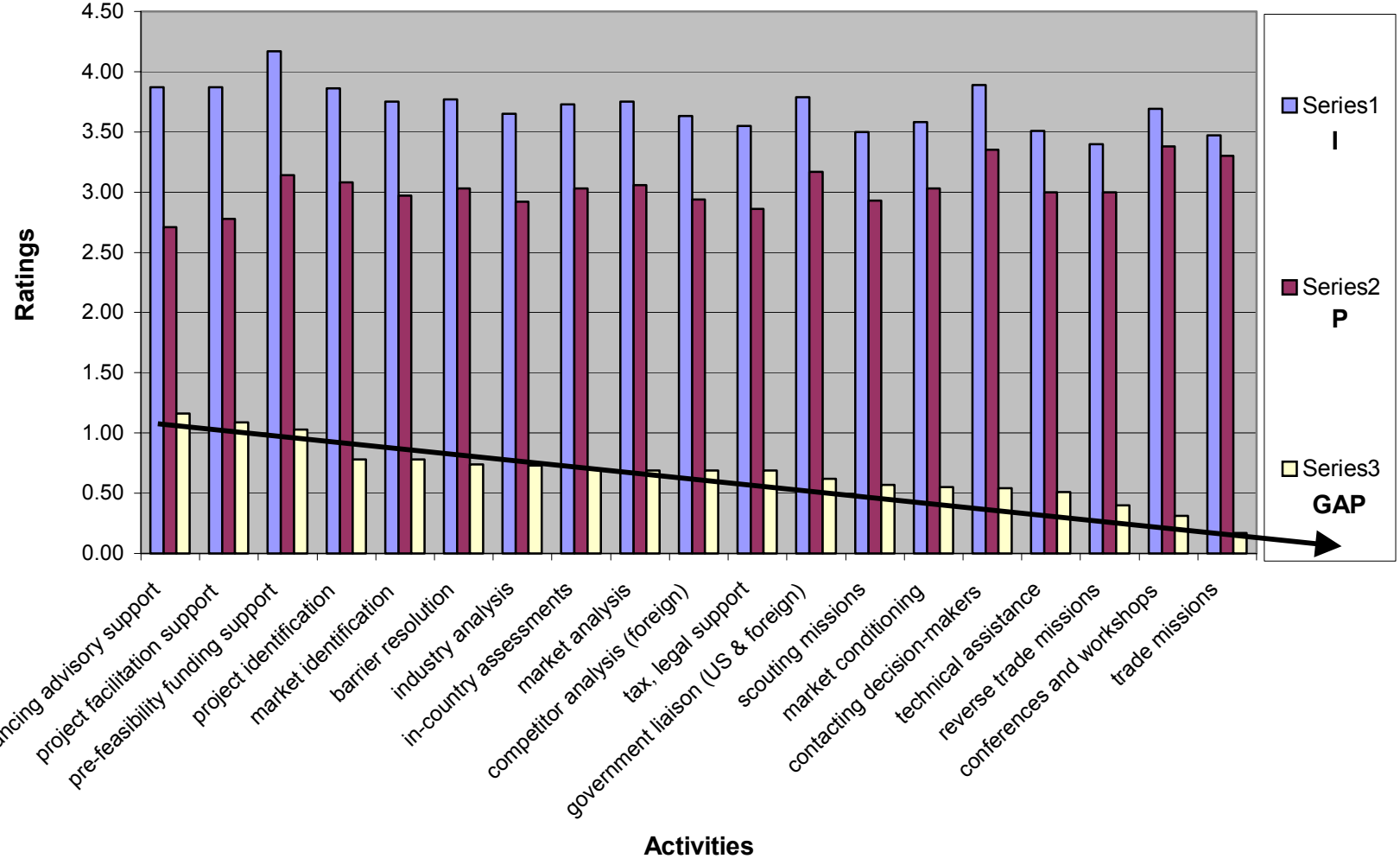


TABLE 5 – GAP ANALYSIS

Importance (I), Performance (P), and Gap Rankings
38 companies - Gross Revenue $5M to $50M (Medium)

EXPORT PROGRAM ACTIVITIES

	I	P	Gap
contacting decision-makers **(most inconsistent P ratings)**	3.78	**3.00 L**	0.78
market conditioning	3.64	**3.21 H**	0.43
project facilitation support	**3.35 L**	2.94	0.41
project identification	3.76	**3.40 H**	0.36
market identification	3.84	**3.53 H**	0.31
tax, legal support	**3.26 L**	3.06	0.20
barrier resolution	**3.50 L**	**3.33 H**	0.17
competitor analysis (foreign)	**3.38 L**	**3.29 H**	0.09
pre-feasibility funding support **(most inconsistent I ratings)**	**3.48 L**	3.47	0.01
technical assistance	3.46	**3.47 H**	-0.01
government liaison (US & foreign)	**3.24 L**	3.29	-0.05
market analysis **(most consistent P ratings)**	3.75	**3.82 H**	-0.07
industry analysis **(most consistent I ratings)**	3.52	**3.63 H**	-0.11
trade missions	**2.88 L**	**3.00 L**	-0.12
Scouting missions	**2.95 L**	3.13	-0.18
reverse trade missions	**2.81 L**	3.00	-0.19
Financing advisory support	**3.04 L**	**3.27 H**	-0.23
in-country assessments	**3.35 L**	**3.60 H**	-0.25
conferences and workshops	**3.13 L**	**3.69 H**	-0.56

NOTES:

1. The data is ranked from high to low on the basis of Gap size.
2. **Bold** numbers indicate averages are statistically significantly different than total population ratings.
3. **L** and **H** indicates ratings are lower or higher than total population equivalents.

For Medium Size firms, Importance (I) ratings of Export Program Activities tend to be significantly lower than for total respondents and Performance (P) ratings tend to be higher. This pattern is just the opposite of the pattern found with Small firms and results in small to negative gaps. **This indicates Medium Size firms are receiving about the right amount of help from ETEP.**

TABLE 6 – GAP ANALYSIS

Importance (I), Performance (P), and Gap Rankings
8 companies - Gross Revenue Greater than $50M (Large)

EXPORT PROGRAM ACTIVITIES

	I	P	Gap
financing advisory support	4.00	3.60	0.40
project identification **(most inconsistent P ratings)**	4.33	4.00	0.33
barrier resolution	3.80	3.50	0.30
in-country assessments **(most consistent P ratings)**	3.67	3.40	0.27
industry analysis	3.50	3.40	0.10
contacting decision-makers	3.29	3.20	0.09
project facilitation support	3.86	3.80	0.06
market analysis	3.83	3.80	0.03
market conditioning **(most consistent P ratings)**	3.00	3.00	0.00
pre-feasibility funding support	4.00	4.00	0.00
reverse trade missions	3.17	3.20	-0.03
competitor analysis (foreign)	3.17	3.40	-0.23
tax, legal support	3.57	3.80	-0.23
trade missions **(most consistent I ratings)**	2.83	3.20	-0.37
conferences and workshops **(most inconsistent I ratings)**	3.57	4.00	-0.43
market identification **(most inconsistent P ratings)**	3.50	4.00	-0.50
government liaison (US & foreign)	3.17	3.80	-0.63
scouting missions	2.71	3.40	-0.69
technical assistance	2.86	3.80	-0.94

NOTES:

1. The data is ranked from high to low on the basis of Gap size.
2. **Bold** numbers indicate averages are statistically significantly different than total population ratings.
3. **L** and **H** indicates ratings are lower or higher than total population equivalents.

Gap analysis of the eight Large firms indicated no significant differences in Importance and Performance ratings when compared to responses from all respondents – a third pattern. This analysis is shown on the next page **and indicates that Large firms are satisfied with ETEP's Activities, although those Activities with the largest gaps are Financing Advisory Support, Project Identification, and Barrier Resolution.**

TABLE 7 – GAP ANALYSIS

Importance (I), Performance (P), and Gap Rankings
55 companies – Engineering

EXPORT PROGRAM ACTIVITIES

	I	P	Gap
project facilitation support	**3.89 H**	**2.81 L**	1.08
financing advisory support	**3.78 H**	2.88	0.90
pre-feasibility funding support **(most inconsistent P ratings)**	**4.33 H**	**3.44 H**	0.89
competitor analysis (foreign)	**3.70 H**	**2.92 L**	0.78
market conditioning	**3.68 H**	**2.93 L**	0.75
market identification	3.84	3.17	0.67
contacting decision-makers	**3.94 H**	3.32	0.62
tax, legal support	**3.62 H**	3.00	0.62
project identification	3.89	3.28	0.61
government liaison (US & foreign)	3.69	**3.12 L**	0.57
barrier resolution	3.78	**3.25 H**	0.53
industry analysis **(most consistent I ratings)**	3.59	3.11	0.48
market analysis	**3.65 L**	**3.19 L**	0.46
technical assistance **(most inconsistent I ratings)**	**3.31 L**	**2.90 L**	0.41
in-country assessments	3.66	3.33	0.33
scouting missions	**3.12 L**	**2.91 L**	0.21
trade missions	3.29	3.17	0.12
reverse trade missions **(most consistent P ratings)**	**2.93 L**	**2.82 L**	0.11
conferences and workshops	**3.31 L**	**3.23 L**	0.08

NOTES:

1. The Data is ranked from high to low on the basis of Gap size.
2. **Bold** numbers indicate averages are statistically significantly different than the total population.
3. **L** and **H** indicate these results are lower or higher than the total population equivalents.

For Engineering firms, Importance (I) ratings for several Export Program Activities tend to be significantly higher than for total respondents and corresponding Performance (P) ratings tend to be lower. This is the same pattern found with Small firms and **indicates the need for additional help from ETEP**. This resulted in an increased the Gap for these activities.

CHART 16
EXPORT PROGRAM ACTIVITIES - 55 ENGINEERING COMPANIES

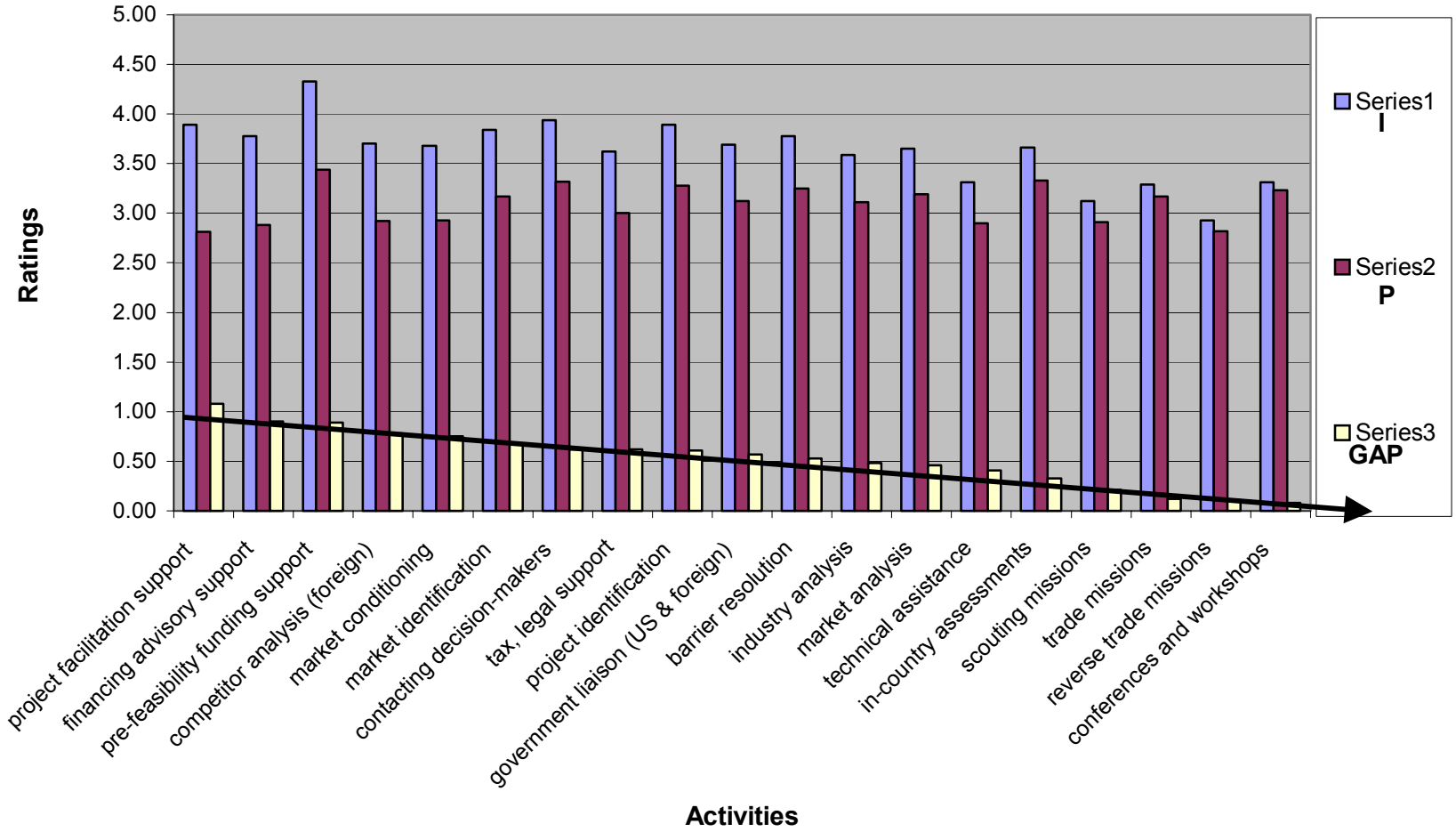


TABLE 8 – GAP ANALYSIS

Importance (I), Performance (P), and Gap Rankings
51 companies – Manufacturing

EXPORT PROGRAM ACTIVITIES

	I	P	Gap
project facilitation support	**3.56 L**	**2.82 L**	0.74
contacting decision-makers **(most inconsistent I ratings)**	**3.58 L**	**2.92 L**	0.66
competitor analysis (foreign)	**3.74 H**	3.08	0.66
market conditioning **(most consistent I ratings)**	**3.74 H**	3.09	0.65
tax, legal support	**3.54 H**	**2.92 L**	0.62
market identification	3.75	3.17	0.58
project identification	**3.77 L**	3.22	0.55
barrier resolution	3.65	3.10	0.55
industry analysis	**3.75 H**	3.21	0.54
financing advisory support	**3.53 L**	3.00	0.53
pre-feasibility funding support **(most inconsistent P ratings)**	**3.62 L**	**3.14 L**	0.48
scouting missions	**3.17 L**	**2.77 L**	0.40
market analysis	3.79	**3.42 H**	0.37
in-country assessments	**3.55 L**	**3.21 L**	0.34
technical assistance	3.41	**3.09 L**	0.32
government liaison (US & foreign)	**3.47 L**	**3.15 L**	0.32
reverse trade missions **(most consistent P ratings)**	**3.00 L**	**2.76 L**	0.24
trade missions	3.22	**3.00 L**	0.22
conferences and workshops	**3.35 L**	**3.38 L**	-0.03

NOTES:

1. The data is ranked from high to low on the basis of Gap size.
2. **Bold** numbers indicate ratings are statistically significantly different than total population ratings.
3. **L** and **H** indicates ratings are lower or higher than total population equivalents.

I and P ratings for the 51 Manufacturing firms are almost all significantly different than corresponding I and P ratings for the 152 respondents. This represents a fourth pattern.

TABLE 9 – GAP ANALYSIS

Importance (I), Performance (P), and Gap Rankings
44 companies - Project Development

EXPORT PROGRAM ACTIVITIES

	I	P	Gap
pre-feasibility funding support **(most consistent I ratings)** **(most inconsistent P ratings)**	**4.63 H**	**3.78 H**	0.85
financing advisory support	**4.00 H**	**3.20 H**	0.80
contacting decision-makers	**4.07 H**	**3.43 H**	0.64
project facilitation support	**4.07 H**	**3.45 H**	0.62
project identification	**4.03 H**	**3.43 H**	0.60
market conditioning	**3.76 H**	**3.20 H**	0.56
tax, legal support	**3.87 H**	**3.35 H**	0.52
barrier resolution	3.76	**3.29 H**	0.47
government liaison (US & foreign)	**4.00 H**	**3.55 H**	0.45
competitor analysis (foreign)	3.63	**3.25 H**	0.38
market identification	3.83	**3.48 H**	0.35
in-country assessments	**3.78 H**	**3.45 H**	0.33
scouting missions	**3.42 H**	**3.19 H**	0.23
reverse trade missions **(most consistent P ratings)**	**3.39 H**	**3.18 H**	0.21
market analysis	3.70	**3.53 H**	0.17
industry analysis	3.66	**3.55 H**	0.11
technical assistance	3.41	**3.32 H**	0.09
trade missions **(most inconsistent I ratings)**	3.31	**3.39 H**	-0.08
conferences and workshops	3.50	**3.87 H**	-0.37

NOTES:

1. The data is ranked from high to low on the basis of Gap size.
2. **Bold** numbers indicate ratings are statistically significantly different than total population ratings.
3. **L** and **H** indicates ratings are lower or higher than total population equivalents.

All I and P ratings for the Project Development firms are not significantly different or are significantly higher than equivalent ratings from all respondents. This represents a fifth pattern.

TABLE 10 – GAP ANALYSIS

Importance (I), Performance (P), and Gap Rankings
76 companies - Energy Efficiency

EXPORT PROGRAM ACTIVITIES

	I	P	Gap
project facilitation support	**3.88 H**	**2.79 L**	1.09
market identification	**3.88 H**	**2.87 L**	1.01
barrier resolution	**3.93 H**	**2.94 L**	0.99
competitor analysis (foreign)	**3.72 H**	**2.79 L**	0.93
financing advisory support	**3.72 H**	**2.81 L**	0.91
contacting decision-makers	**3.92 H**	**3.03 L**	0.89
project identification	**3.82 L**	**2.98 L**	0.84
market analysis	**3.89 H**	**3.06 L**	0.83
market conditioning **(most consistent P ratings)**	**3.65 H**	**2.85 L**	0.80
industry analysis **(most consistent I ratings)**	**3.74 H**	**2.97 L**	0.77
tax, legal support	**3.52 H**	**2.86 L**	0.66
in-country assessments	3.68	**3.06 L**	0.62
technical assistance	**3.66 H**	**3.08 L**	0.58
government liaison (US & foreign) **(most inconsistent P ratings)**	3.60	**3.03 L**	0.57
scouting missions	3.36	**2.93 L**	0.43
reverse trade missions	3.14	**2.84 L**	0.30
conferences and workshops	3.49	**3.25 L**	0.24
trade missions **(most inconsistent I ratings)**	3.21	3.13	0.08
pre-feasibility funding support	**3.15 H**	**3.12 L**	0.03

NOTES:

1. The data is ranked from high to low on the basis of Gap size.
2. **Bold** numbers indicate ratings are statistically significantly different than total population ratings.
3. **L** and **H** indicates ratings are lower or higher than total population equivalents.

The I/P pattern here is similar to that found with Small firms and Engineering firms. **It indicates the need for additional help from ETEP.**

TABLE 11 – GAP ANALYSIS

Importance (I), Performance (P), and Gap Rankings
45 companies – Photovoltaic

EXPORT PROGRAM ACTIVITIES

	I	P	Gap
project identification	**4.00 H**	**3.63 H**	0.37
project facilitation support	**3.50 L**	**3.17 H**	0.33
financing advisory support	**3.44 L**	**3.17 H**	0.27
market identification	3.76	**3.53 H**	0.23
pre-feasibility funding support **(most inconsistent P ratings)**	**3.81 L**	**3.59 H**	0.22
barrier resolution	3.79	**3.60 H**	0.19
contacting decision-makers	**3.56 L**	**3.42 H**	0.14
market conditioning	3.54	**3.50 H**	0.04
competitor analysis (foreign)	**3.38 L**	**3.38 H**	0.00
government liaison (US & foreign) **(most consistent I ratings)**	3.64	**3.65 H**	-0.01
market analysis	**3.54 L**	**3.61 H**	-0.07
technical assistance	3.41	**3.50 H**	-0.09
scouting missions	**3.19 L**	**3.31 H**	-0.12
industry analysis	**3.29 L**	**3.41 H**	-0.12
reverse trade missions	**2.96 L**	**3.14 H**	-0.18
in-country assessments **(most consistent P ratings)**	3.56	**3.75 H**	-0.19
tax, legal support	**3.22 L**	**3.53 H**	-0.31
conferences and workshops **(most inconsistent I ratings)**	**3.38 L**	**3.71 H**	-0.33
trade missions	3.23	**3.69 H**	-0.46

NOTES:

1. The data is ranked from high to low on the basis of Gap size.
2. **Bold** numbers indicate ratings are statistically significantly different than total population ratings.
3. **L** and **H** indicates ratings are lower or higher than total population equivalents.

The Photovolactic I/P pattern is much like the Medium Size firms, resulting is low to negative gaps (**surpassing expectations**).

Chart 17

EXPORT PROGRAM ACTIVITIES - 45 PHOTOVOLTAIC COMPANIES

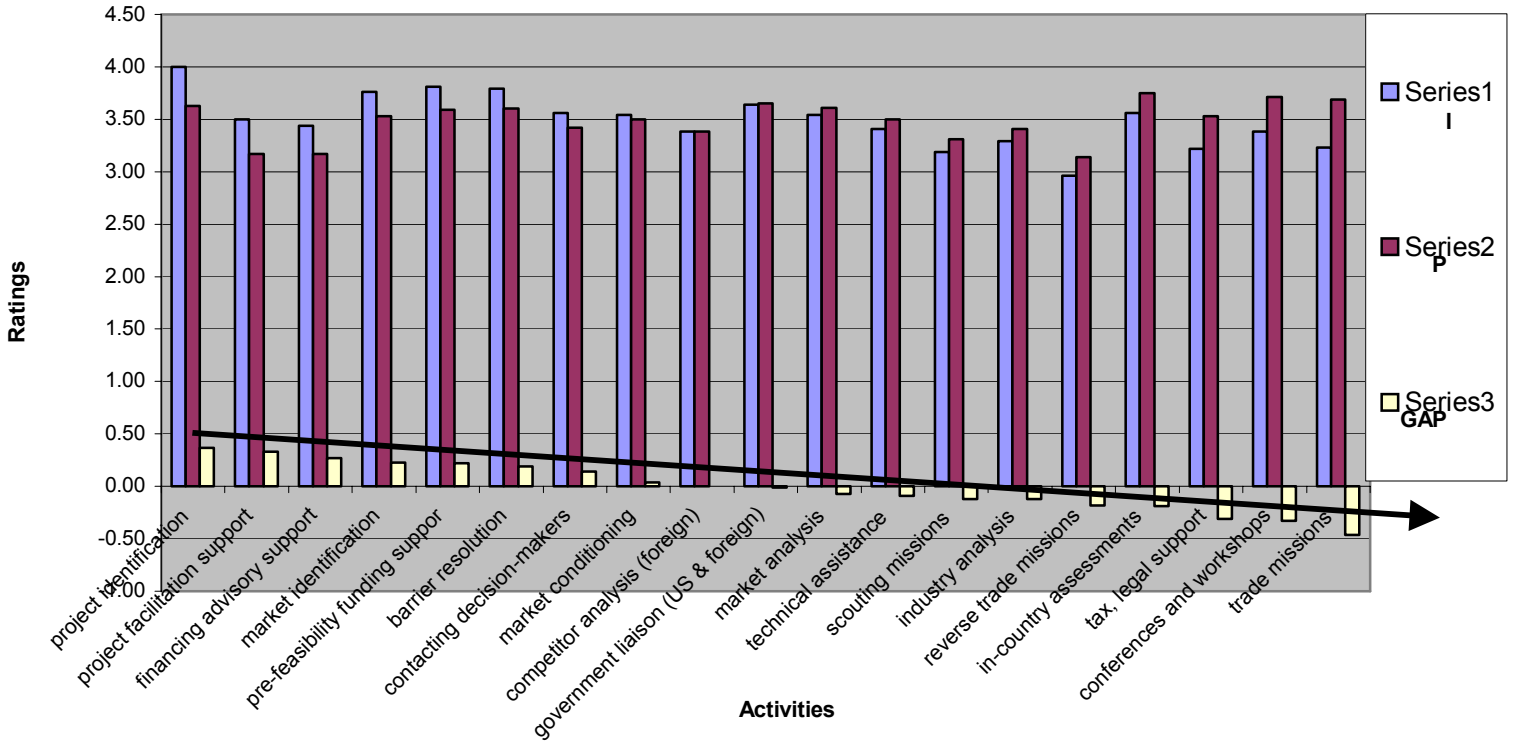


TABLE 12 – GAP ANALYSIS

Importance (I), Performance (P), and Gap Rankings
40 companies – Cogeneration

EXPORT PROGRAM ACTIVITIES

	I	P	Gap
contacting decision-makers	**4.07 H**	3.14	0.93
market conditioning **(most consistent P ratings)**	**3.93 H**	3.00	0.93
project facilitation support	**4.03 H**	**3.10 H**	0.93
technical assistance	**3.71 H**	**2.86 L**	0.85
competitor analysis (foreign)	**3.68 H**	**2.83 L**	0.85
project identification	**4.03 H**	3.27	0.76
financing advisory support	**3.81 H**	3.05	0.76
pre-feasibility funding support	**4.31 H**	**3.55 H**	0.76
Industry analysis (**most consistent I ratings)**	**3.94 H**	3.23	0.71
market analysis	**3.93 H**	3.24	0.69
market identification	**3.90 H**	**3.25**	0.65
in-country assessments	**3.93 H**	3.32	0.61
tax, legal support **(most inconsistent I ratings)**	**3.70 H**	3.11	0.59
(most inconsistent P ratings)			
barrier resolution	3.71	3.12	0.59
government liaison (US & foreign)	**3.77 H**	3.32	0.45
scouting missions	**3.48 H**	3.06	0.42
conferences and workshops	3.50	**3.29 L**	0.21
Reverse trade missions	**3.00 L**	3.00	0.00
trade missions	3.23	**3.35 H**	-0.12

NOTES:

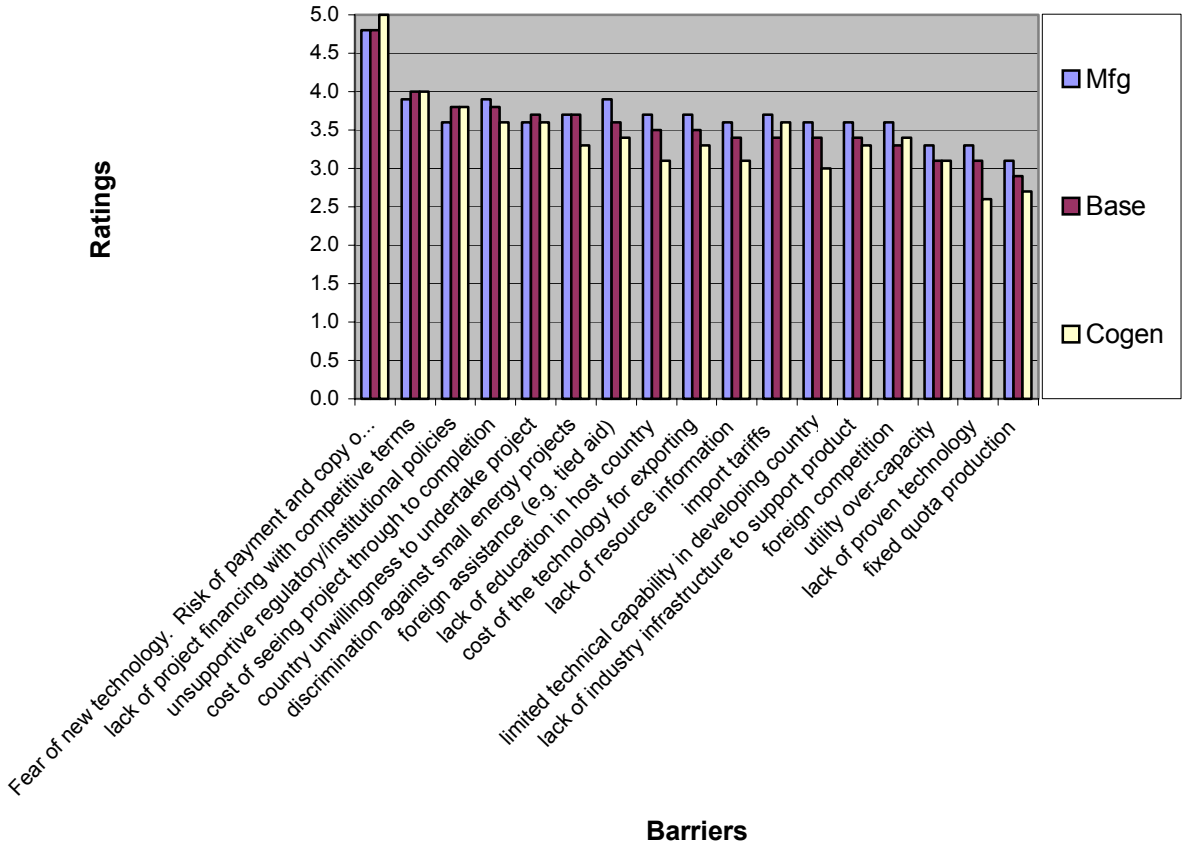
1. The data is ranked from high to low on the basis of Gap size.
2. **Bold** numbers indicate ratings are statistically significantly different than total population ratings.
3. **L** and **H** indicates ratings are lower or higher than total population equivalents.

The Cogeneration pattern is similar to Small firms, Engineering Firms, and Energy Efficiency firms, **requiring additional help from ETEP.**

IV. Exporting Barriers

Break out Group Barriers to exporting vary significantly when compared to the total respondent responses. Small, Engineering, Photovoltaic, and Cogeneration firms reported most barriers as being less significant than respective barriers reported by total respondents. Manufacturing firms reported most barriers more significant. Remaining break out groups were mixed. Chart 18 shows all the Barrier ratings for all firms responding (base) and the Manufacturing and Cogeneration break out groups.

CHART 18
BARRIERS TO EXPORTING



See the table on the next page for a summary of barriers reported by all break out groups.

BARRIERS - ALL RESPONDENTS (152) AND BREAK OUT GROUPS

Statistically Significant and Insignificant **Differences**

BARRIERS			BREAK OUT GROUPS: Size			Activity			Technology		
			Small	**Medium**	**Large**	**Engin**	**Mfg**	**PD**	**EE**	**Photo**	**Cogen**
	Number of Firms Responding Total: 152		98	38	8	55	51	44	76	45	40
Fear of new technology. Risk of payment and copy of products. Corrupt business practices. Political Aspects. Export shipping. **(most consistent ratings)**	4.8	sd = **0.45**	4.7	5.0	-	5.0	4.8	5.0	5.0	**4.0 L**	5.0
lack of project financing with competitive terms	4.0	sd = 1.17	4.0	4.0	4.4	**3.9 L**	**3.9 L**	4.1	4.0	**3.7 L**	4.0
unsupportive regulatory/institutional policies	3.8	sd = 1.06	**3.7 L**	3.9	3.8	**3.9 H**	**3.6 L**	3.8	3.8	**3.8 L**	3.8
cost of seeing project through to completion	3.8	sd = 1.12	**3.7 L**	3.8	4.3	3.8	**3.9 H**	**4.0H**	**3.9 H**	3.9	**3.6 L**
country unwillingness to undertake project	3.7	sd = 1.34	**3.5 L**	**4.0 H**	3.8	**3.5 L**	**3.6 L**	**3.5 L**	**3.5 L**	**3.5 L**	3.6
discrimination against small energy projects	3.7	sd = 1.17	**3.8 H**	**3.4 L**	3.4	3.7		**3.9 H**	**3.8 H**	**3.3 L**	**3.3 L**
foreign assistance (e.g. tied aid)	3.6	sd = 1.12	**3.7 H**	3.6	3.8	3.6	**3.9 H**	**3.8 H**	**3.7 H**	3.5	**3.4 L**
lack of education in host country	3.5	sd = 1.14	3.6	3.5	3.6	3.5	**3.7 H**	3.6	**3.5 L**	**3.4 L**	**3.1 L**
cost of the technology for exporting	3.5	sd = 1.19	**3.6 H**	3.6	3.5	**3.4 L**	**3.7 H**	**3.7 H**	**3.7 H**	**3.8 H**	**3.3 L**
lack of resource information	3.4	sd = 1.14	**3.3 L**	3.5	4.4	**3.2 L**	**3.6 H**	**3.2 L**	3.4	**3.6 H**	**3.1 L**
import tariffs	3.4	sd = 1.31	**3.3 L**	**3.6 H**	2.5	3.3	**3.7 H**	3.4	**3.6 H**	3.3	**3.6 H**
limited technical capability in developing country	3.4	sd = 1.18	**3.3 L**	3.4	3.8	**3.2 L**	**3.6 H**	3.5	**3.3 L**	3.4	**3.0 L**
lack of industry infrastructure to support product	3.4	sd = 1.21	**3.2 L**	3.4	4.2	**3.1 L**	**3.6 H**	**3.2 L**	3.4	3.3	3.3
foreign competition	3.3	sd = 1.19	**3.1 L**	**3.8 H**	2.8	**3.1 L**	**3.6 H**	3.3	3.3	**3.2 L**	3.4
utility over-capacity **(most inconsistent rating)**	3.1	sd = **1.38**	**2.7 L**	**3.9 H**	3.3	3.0	**3.3 H**	3.1	**2.9 L**	**2.6 L**	3.1
lack of proven technology	3.1	sd = 1.25	3.1	**2.9 L**	3.8	**2.8 L**	**3.3 H**	3.0	3.1	**2.9 L**	**2.6 L**
fixed quota production	2.9	sd = 1.19	2.9	3.0	2.3	**2.6 L**	**3.1 H**	2.9	2.8	**2.7 L**	**2.7 L**

NOTES:

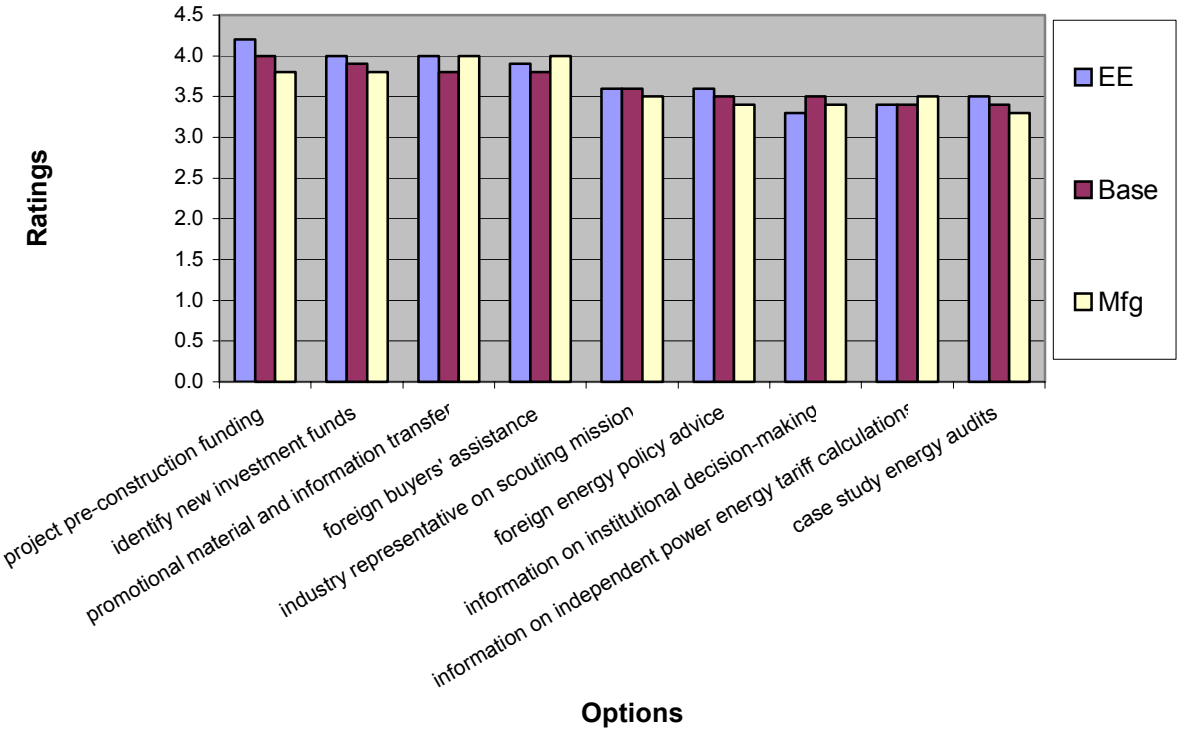
1. The rating scale measures impact of trends in efforts to conduct international business.
2. The rating scale ranges from 2: most positive impact to 0: no impact to -2: most negative impact.
3. **Bold** numbers are statistically significantly different than the responses of the 152 total survey respondents.
4. **H** indicates results statistically significantly higher than 152 respondents' results; **L** indicates results statistically significantly lower than 152 respondents' results.
5. Non-bold numbers in the Size, Activity, and Technology columns indicate results are not statistically significantly different than those of the 152 respondents.

There was not enough data received from the nine break out groups to summarize ETEP Service Gap Analysis by these groups.

V. ETEP Potential Options

Break out Group responses to ETEP Options as being potentially important to exporting vary significantly when compared to the total respondent responses. Most break out groups reported mixed results with some options significantly higher and some lower than respective total respondents ratings. Two break out groups, Small and Large firms, reported no significant differences. The Energy Efficiency break out group reported most options as more important than equivalent total respondent responses. See the table on the next page for a summary of options reported by all break out groups.

CHART 19
POTENTIAL ETEP OPTIONS



OPTIONS - ALL RESPONDENTS (152) AND BREAK OUT GROUPS

Statistically Significant and Insignificant **Differences**

OPTIONS		BREAK OUT GROUPS: Size			Activity			Technology		
		Small	**Medium**	**Large**	**Engin**	**Mfg**	**PD**	**EE**	**Photo**	**Cogen**
	Number of Firms Responding Total: 152	98	38	8	55	51	44	76	45	40
project pre-construction funding	4.0 sd = 1.14	**3.9 L**	**4.2 L**	3.6	4.0	**3.8 L**	**4.3 H**	**4.2 H**	**3.8 L**	4.1
identify new investment funds	3.9 sd = 1.16	**4.0 H**	**4.2 L**	**3.4 L**	**4.0 H**	**3.8 L**	**4.2 H**	**4.0 H**	**4.1 H**	3.9
promotional material and information transfer	3.8 sd = 1.16	**3.9 H**	3.8	3.4	3.9	**4.0 H**	**3.6 L**	**4.0 H**	**4.0 H**	3.7
foreign buyers' assistance	3.8 sd = 1.15	3.8	**4.0 H**	3.4	3.8	**4.0 H**	3.9	**3.9 H**	3.8	3.7
industry representative on scouting mission	3.6 sd = 1.20	**3.7 H**	**3.4 L**	3.6	**3.4 L**	**3.5 L**	3.5	3.6	3.6	3.5
foreign energy policy advice **(most consistent ratings)**	3.5 sd = **1.12**	3.6	3.6	3.1	3.6	**3.4 L**	**3.4 L**	**3.6 H**	3.6	3.4
information on institutional decision-making	3.5 sd = 1.12	3.6	3.4	3.5	**3.4 L**	**3.4 L**	**3.4 L**	**3.3 L**	**3.3 L**	**3.4 L**
information on independent power energy tariff calculations **most inconsistent ratings)**	3.4 sd = **1.23**	**3.3 L**	3.5	3.8	3.5	3.5	**3.7 H**	3.4	3.3	**3.6 H**
case study energy audits	3.4 sd = 1.15	**3.5 H**	3.4	3.3	**3.6 H**	**3.3 L**	**3.3 L**	**3.5 H**	**3.8 H**	3.5

NOTES:

1. The rating scale measures impact of trends in efforts to conduct international business.
2. The rating scale ranges from 2: most positive impact to 0: no impact to -2: most negative impact.
3. **Bold** numbers are statistically significantly different than the responses of the 152 total survey respondents.
4. **H** indicates results statistically significantly higher than 152 respondents' results; **L** indicates results statistically significantly lower than 152 respondents' results.
5. Non-bold numbers in the Size, Activity, and Technology columns indicate results are not statistically significantly different than those of the 152 respondents.

VI. Overall ETEP Performance Rating

All survey participants were asked to rate the following statement on a scale from 5: I strongly agree to 1: I strongly disagree.

"The active support and involvement of the Energy Technology Export Program is important to increasing California's energy industry exports."

The average result from all respondents and the nine break out groups follows:

All Respondents (152)	3.8
Cogeneration (40)	**4.2 H**
Photovolatic (45)	**4.1 H**
Engineering (55)	**3.9 H**
Small (98)	**3.9 H**
Medium (28)	**3.9 H**
Large (8)	3.8
Energy Efficiency (76)	**3.7 L**
Manufacturing (51)	**3.7 L**
Project Development (44)	**3.6 L**

2003 VERBATIM COMMENTS

I7. Comments regarding Part I.

1. Photoluminescent EXIT signs and photoluminescent emergency lighting manufacturer.
2. Please include thermal energy storage as a category.
3. Our business also deals with grid support DG and international projects in Latin America.
4. Assumes a large, ongoing organization selling hardware-based results. Orientation doesn't cove "scalable" project(s) management, where a team is formed to size according to customer and site project specs, not vendor intentions. Demand drivers are followed, not supply drivers. No special credit to serving the need, versus serving the offer.
5. We manufacture commercial, industrial, institutional and custom energy efficient fluorescent lighting fixtures.
6. We are in the commercial development stages of installing UC Davis patented Anaerobic Digestion Technology.
7. We are engaging in manufacturing and development of new energy efficient lighting products and components.
8. WE are a large company but our solar activities are relatively small.
9. Well organized.
10. We are disappointed R&D is not important to CEC.
11. No product yet. We are still looking for funding to finish development.
12. Energy producers that use pipe in their systems are our customers.
13. Further research and formal testing are in planning stages.
14. The numbers of people employed depends on the status of the project.
15. We ship samples from our San Diego manufacturing site that will be used for tests in third world sites. The manufacturing facility in San Diego will be used as a training facility.

II10. Comments regarding Part II.

1. We work with foreign government agencies who expect to see import of hard dollars before making their own matching commitments of funds. The UK DTI was particularly favorable and interested (with 7 M pounds available), but reluctant to find proper to hard funding from US sources.
2. Initiation would take much longer that actual time to complete export deals.
3. We sold a very limited number of solar trackers to individuals and government research organizations overseas.
4. It takes a long time to develop business overseas.
5. Well organized.
6. We have impressive cost-saving technology if it is marketed correctly.

7. We are amazed at the emphasis on technology exports.
8. Many of our customers perform contract work direct with public agencies.
9. We are expecting major expansion due to export sales.
10. Different time frames for different projects.
11. Our business model is to teach third world companies how to manufacture our product for distribution in their region.

III7. Comments regarding Part III.

1. The effect in my business from transition of foreign countries to democratic process is too long of a process.
2. Utility rate commitment (low) in Mexico without current emissions and pollution standards will have long term effect on manufacturing in the U.S.A.
3. A large negative impact on (k) in the duty on ethanol imported from Mexico.
4. The international market of EE products depends heavily on local government policies.
5. It is hard to say what, if any, impact these things will have.
6. I feel the federal government should offer greater incentives in the alternative energy field.
7. Our objective is information dissemination.
8. It is very much of a guessing game as maintenance must still be done regardless of who owns the facility.
9. Energy savings benefits are available now. Studies are needed to explore a wide range o applications and exploitations.
10. One of our major project developments is rebuilding Cuba's electrical syste. California, with a wealth of Spanish speaking exerts, provides an excellent base. The project we are developing requires close cooperation among US/Mexico-Cuba & California/Florida.

IV15. List any programs or activities that you feel the CEC/ETEP should consider in the future.

1. Access to development and finance capital.
2. Energy technology conferences.
3. Project financing sources workshop.
4. Promote demand responsive and peak shifting technologies.
5. Accept advice from foreign countries on peak demand avoidance.
6. Accept advice from foreign countries on thermal energy storage.
7. The CEC would be helpful to identify key industrial and governmental contacts and provide the information to CA companies.
8. We are not clear on what value the efforts in Asia have had for business in CA. A cost/benefit analysis should be performed to determine if the CA funds are being used wisely.

9. Efforts should be focused on immediate neighbors to the south to improve relations and business opportunities.
10. A program to assist foreign countries to reduce their fossil energy imports by replacement of gasoline with fuel ethanol. And a project that would assist Third World countries to produce potable water using renewable energy (solar and/or wind).

11. Cross-cutting efforts to leverage more than one proprietary resource.
12. Integration of systems (more than providing one system alone).
13. Mass market residential focus.
14. EE lighting manufacturing industry in China. We may find they need a lot of US made advanced components.
15. ESCO type of financing needed in China for all EE areas, not just lighting.
16. Small city (half million population and up) district heating projects, BOT.
17. California trade pavilions at overseas events help offset our overseas exhibition costs.
18. Please, please, please make it easier (cost) to get certifications from EPA and our CARB.
19. Continue the “Infrastructure Finance Conference” (the past was a success!); add: a Forum of USA equity and debt providers vertical to the China market; add: a quarterly report on CA company activities in energy finance/development activities; add: what are the resultys of other IEF benefactors: show the results!
20. We are interested in the China power market; Add: a quarterly update of current CA/USA/China energy finance development success stories; add; what ae the results of previous IEF grant awards and how their success can help others.
21. Help subsidize engineering projects to get foot into door.
22. Solar energy technology development programs.
23. The CEC should not get involved in the foreign energy market. It should worry about California’s energy problems.
24. Increase funding for pre-construction/feasibility. Provide project financing at competitive rates.
25. All energy related projects i.e. water purification/waste heat.
26. Import tariffs in other countries discourage US products and limit our exports to be competitive.
27. We need assistance in locating and checking on reliable sales representatives.
28. ETEP should attempt to understand the significance of Boloslient (???-see #150) Technology and its relationship to human comfort.
29. Supporting more CDM projects for California energy exporters.
30. Transportation efficiency/ alternative transit modes.
31. Energy efficiency projects and technology in S.E. Asia.
32. Demonstration units totally funded in the foreign country.
33. Funding demonstrations.
34. Educate the legislature about the coming global oil crisis.
35. High efficiency, low cost air compressors, air conditioners, water pumps, refrigerators, freezers, fans and blowers, barn and crop ventilation, solar cookers, solar pasteurizes, all from single-phase power sources. Please contact me. Our CEC study needs to be implemented to achieve the millions and billions of dollars savings. (J.M. Smith (510) 525-9126)

IV17. Comments on any other points not covered in the survey.

1. Funding through ETEP is very limited and appears to be targeted towards a few companies.
2. The goals and objectives of the program are vague. We have heard from foreign clients that there are too many strings attached to make it worthwhile for them.
3. Check to whom you are sending the survey. It does not seem to apply to our business activities.
4. You perform a valuable service. Thank you!
5. California should lead by example. This form should at least mention thermal energy storage.
6. Most countries in the Far East are more knowledgeable about the benefits or thermal storage than California.
7. It is embarrassing to admit to foreign engineers that California does not have proper time of use rates.
8. We are unsure of the effectiveness the ETEP is in developing new business for the energy industry and associated businesses.
9. An issue with energy projects in Latin America is the risk of investment in that country. We are not sure what, if anything, can the program do to alleviate the risk.
10. Good questions!
11. CED staff is difficult to work with. CEC seems small businesses unfriendly.
12. The EE market is multi faceted and interwoven. Through our electronic ballast project in China we naturally get involved in helping the US vendor of LED emitters to export their products to China, and initiating another project of exporting eight foot florescent lamps from the US to China. The end result in this case is that the total export value of LED to China would be larger than the value of EB imported from China for the next few years. Also, because of our involvement in EB and LED, we are initiating an ambitious program of exporting eight foot 95W florescent lamps from USA to China, which again can exceed our original value of EB imported from China.
13. ETEP is an excellent program, one which has been entirely critical in our efforts to open export markets. We strongly urge that the program be vigorously continued.
14. I am sorry that our comments could not be more specific. We have not been involved in export activities in many years. Primarily, we found we could not be competitive with our solar thermal products in the export market.
15. We would like to export more in the future. I think our biggest problems are marketing and education about our products, the amount of support we usually need to provide, payment terms and assurances, and variations in local materials.
16. The CEC's ETEP has a great team and is very supportive in helping small California companies in exporting energy technologies. Without this program, it would be impossible for us to conduct business overseas. This is an outstanding program, the best in the United States. The State should continue to support this program.

17. The CEC and IEF grant has significantly helped us in our development of our China energy project. The political importance in China of the IEF grant is more important than in the USA, because they recognize the government stamp of approval on the project.
18. We would like to export more of our products and services. This would be a great benefit. We do not have any real technology to transfer.
19. Being a local area petroleum distributer there is not much in the survey that has any effect on me.
20. Most of our sales have been pull through on other vendor apparatus, or wind farm development.
21. A technology similar (but inferior) to Biloslagate ?? Technology jas been tried many times and is on the market now; however, the technology is not understood by the marketing people or the public. As a result, the product is misused. The biggest problem is this technology has the potential of saving too much energy which imposes problems with utility companies whose objectives are to expand the use of energy. SMUD, PG&E, US DOE and others tend to resust this technology, based on their skewed concept that the A/C and utilities industries would be undermined.
    Access to human comfort by the citizens of the world should motivate the existence of an improved energy distribution and utilization concept. Bokosilintec Technology, if understood, would enhance current concepts – not replace them.
22. Why were we sent one? We are small and almost entirely domestic.
23. I would like some information on how your organization could help us selling structural engineering services.
24. Transportation efficiency is where we are loosing market share globally.
25. I don't export any products at this time.
26. We have not actively pursued these markets, so we are not knowledgeable in most questions.
27. The USA energy exports will languish as long as USA does not participate in the Kyoto treaty. We must "walk the talk" or third world will turn to ECC, Japan for solutions.

California Energy Commission Energy Technology Export Program 2003 Survey Questionnaire

Please enter your information in the areas shaded in blue

Contact Information *(confidential)*

Organization Name _____

Contact First Name _____
Contact Last Name _____
Title _____

PART I. BACKGROUND INFORMATION
(Please complete all questions.)

1 Which term(s) best describe your business activities?
(check all boxes that apply)

- ☐ a. manufacturer
- ☐ b. project developer
- ☐ c. engineering
- ☐ d. system integrator
- ☐ e. service provider
- ☐ f. construction
- ☐ g. finance
- ☐ h. legal
- ☐ i. distributor
- ☐ j. consultant
- ☐ k. research & development
- ☐ l. fuel supplier
- ☐ m. resource exploration
- ☐ n. other (specify) _____

2 Which energy technology(s) are most related to your primary business activity:
(check all boxes that apply)

- ☐ a. biomass
- ☐ b. coal
- ☐ c. cogeneration
- ☐ d. energy efficiency
- ☐ e. geothermal
- ☐ f. hydropower
- ☐ g. natural gas
- ☐ h. petroleum
- ☐ i. photovoltaic
- ☐ j. solar thermal
- ☐ k. wind
- ☐ l. other (specify) _____

3 The principal focus of your business is?

- ○ a. grid/utility power generation
- ○ b. remote/distributed power generation
- ○ c. industrial cogeneration
- ○ d. energy efficiency products/services
- ○ e. transportation fuels/technology
- ○ f. other (specify) _____

4 Does your organization directly employ people in locations other than California?

- ○ a. yes, other states
- ○ b. yes, other countries
- ○ c. yes, both other states and other countries
- ○ d. no

5 As of year-end 2002, how many people did your organization employ?

a. within California
b. outside California _____
total none

6 Please provide approximate total gross revenue for your organization in 2002.

- ○ a. < $5M
- ○ b. $5M to $50M

c. > $50M

7 Comments regarding Part I:

PART II. CALIFORNIA EXPORT ACTIVITIES

(To be completed only by organizations who currently export or plan to pursue international projects and/or export products/services during the next three years)

1 Does your company plan to export your products or services during the next 3 years?

- a. yes
- b. no

2 Has your organization exported its products or services during the past 3 years?

- a. yes
- b. no

If you answered no to questions 1 and 2, go to Part III.

3 How many years has your company been an exporter?

- a. < 5
- b. 5 to 10
- c. 11 to 15
- d. 16 to 20
- e. > 20

4 Which phrase best describes your expected trend over the next three years in gross revenues from export sales?

- a. about the same
- b. increasing
- c. decreasing

5 What percentage of your organization's exports is destined for the following types of projects?

a. Private
b. Public
c. Other _____ (specify) _____
total (should be 100%)

6 What percentage of your 2002 total gross revenues are from exports?

- a. less than 5%
- b. 6% to 25%
- c. 26% to 50%
- d. 51% to 75%
- e. 76% to 100%

7 Your 2002 export revenues were:

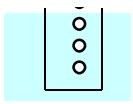
- a. about the same as 2001
- b. less than 2001
- c. more than 2001

8 Your goal over the next three years is to have export revenues grow at an average annual rate of:

- a. less than 10%
- b. 11% to 25%
- c. 26% to 50%
- d. 51% to 75%
- e. 76% to 100%
- f . no export revenue goal

9 Please estimate the timeframe needed to initiate and complete business deals in export markets.

- a. < 6 months
- b. 7 months to 1 year



c. 13 months to 2 years
d. 25 months to 4 years
e. > 4 years

10 Comments regarding Part II:

PART III. INDUSTRY OUTLOOK
(Please complete all questions)

1 Has electricity restructuring in the U.S. affected your company's domestic sales?

- a. yes, increased domestic sales
- b. yes, decreased domestic sales
- c. no

2 Is electricity restructuring in the U.S. causing your company to consider selling your products and services in international markets?

- a. yes
- b. no

3 Is electricity restructuring in the U.S. causing your company to consider new project development opportunities in the international market?

- a. yes
- b. no

4 Does your company envision being a candidate for a merger or buy-out?

- a. yes, by a foreign entity
- b. yes, by a domestic entity
- c. yes, unknown if foreign or domestic
- d. no

5 Over the next 3 years, from where does your business anticipate deriving revenue? (Please provide percentage distribution.)

a. domestic activities
b. internation activities
total (should be 100%)

6 Please indicate how the following trends will impact your company's efforts to conduct international business.

TRENDS	most negative		no impact		most positive	no opinion
a. greenhouse gas emission policies and global climate change	O	O	O	O	O	O
b. privatization of government-owned utilities	O	O	O	O	O	O
c. worldwide economic lethargy	O	O	O	O	O	O
d. transition of foreign countries to democratic styles of government	O	O	O	O	O	O
e. california/U.S. electricity restructuring	O	O	O	O	O	O
f. terrorism impact on energy development and energy security	O	O	O	O	O	O
g. energy technology advances - new technology maturity	O	O	O	O	O	O
h. access to project financing with competitive terms	O	O	O	O	O	O
i. international competition	O	O	O	O	O	O
j. globalization of manufacturing and business	O	O	O	O	O	O
k. energy prospects and issues on California-Mexico border area	O	O	O	O	O	O

7 Comments regarding Part III:

Part IV. CEC's ENERGY TECHNOLOGY EXPORT PROGRAM (ETEP) ASSESSMENT
(Please complete all questions.)

Section A. General Assessment Items

1 Using the following importance and performance rating scales, please rate the Energy Technology Export Program's activities 1a-t as to how important each is to your company (importance) and how satisfied your company is with recent results of each activity (performance).

IMPORTANCE
1 = extremely unimportant
2 = unimportant
3 = neither unimportant nor important
4 = important
5 = extremely important
0 = no opinion

PERFORMANCE
1 = extremely dissatisfied
2 = dissatisfied
3 = neither dissatisfied nor satisfied
4 = satisfied
5 = extremely satisfied
0 = no opinion

IMPORTANCE 1 2 3 4 5 0	ACTIVITY	PERFORMANCE 1 2 3 4 5 0
	a. trade missions	
	b. reverse trade missions	
	c. scouting missions	
	d. contacting decision-makers	
	e. technical assistance	
	f. conference & workshops	
	g. market conditioning	
	h. market analysis	
	i. project identification	
	j. market identification	
	k. government liaison (US & foreign)	
	l. industry analysis	
	m. in-country assessments	
	n. barrier resolution	
	o. competitor analysis (foreign)	
	p. financing advisory support	
	q. pre-feasibility funding support	
	r. tax, legal support	
	s. project facilitation support	
	t. Other (specify)	

2 From the drop-down boxes below, please select up to 6 countries that are important to your future export goals. If you select more than one country, use a different drop-down box for each country you select. From the checkboxes to the right of each country chosen, please select the project opportunity types that you have identified for that country. You may check one or more opportunity types for the countries you choose.

Project Opportunity Type:

A – Independent Power Production
B – Energy Efficiency
C – Onsite Cogeneration
D – Remote Power
E – Transportation Fuels/Technology
F – Oil/Gas Exploration and Production
G –Transmission and Distribution Technology
H – Energy Balance of System components
I – Other (specify to right of checkboxes)

Country	Project Opportunity Type(s) A B C D E F G H I	

3 Using the following significance rating scale, please rate barriers 4a-q as to how significant each is to your company

in regards to exporting.

SIGNIFICANCE
1 = extremely insignificant
2 = insignificant
3 = neither insignificant nor significant
4 = significant
5 = extremely significant
0 = no opinion

BARRIERS

1	2	3	4	5	0	
O	O	O	O	O	O	a. country unwillingness to undertake project
O	O	O	O	O	O	b. lack of project financing with competitive terms
O	O	O	O	O	O	c. fixed quota production
O	O	O	O	O	O	d. import tariffs
O	O	O	O	O	O	e. lack of education in host country
O	O	O	O	O	O	f. limited technical capability in a developing country
O	O	O	O	O	O	g. utility over-capacity
O	O	O	O	O	O	h. unsupportive regulatory/institutional policies
O	O	O	O	O	O	i. foreign competition
O	O	O	O	O	O	j. foreign assistance (e.g. tied aid)
O	O	O	O	O	O	k. lack of proven technology
O	O	O	O	O	O	l. lack of industry infrastructure to support product
O	O	O	O	O	O	m. lack of resource information
O	O	O	O	O	O	n. discrimination against small energy projects
O	O	O	O	O	O	o. cost of the technology for exporting
O	O	O	O	O	O	p. cost of seeing project through to completion
O	O	O	O	O	O	q. Other (specify) _____

Section B. Assessment Items Specific to Energy Technology Export Program (ETEP)

4 Has your organization been involved in any ETEP activities?

O a. yes
O b. no

If you answered yes, continue with this section. If your answer was no, then proceed to question 13.

5 What is the status of your project development initiatives that have been supported by ETEP funding or ETEP staff?

O a. memoranda of understanding/letters of interest (preliminary stages).
O b. detailed contract work in progress (not fully negotiated).
O c. all agreements signed/contract finalized (revenue is flowing).
O d. other: _____

6 What percent of your 2001-2002 export sales/revenues are related to ETEP activities?

_____

7 What was the dollar value of the sales/revenue attributable to ETEP involvement during 2001-2002? (sales meaning equipment, consulting, services etc. that the company achieved or is confident of achieving but is still pursuing)

_____

8 What is the nature of the increased sales/revenues?

O a. contract for service
O b. equipment sale
O c. project development
O d. turnkey operation
O e. other: _____

9 How many ETEP activities have you been involved with, in which your company made new international business contacts?

_____

10 How has your involvement with ETEP affected new international business contacts?

- a. increased
- b. no change
- c. decreased

11 How has your knowledge of export market opportunities been affected by your involvement with ETEP?

- a. increased
- b. no change
- c. decreased

12 Using the following scales, please rate ETEP's services 12a-g as to how important each is to your company (importance) and how satisfied you are with the results (performance.)

IMPORTANCE

1 = extremely unimportant
2 = unimportant
3 = neither unimportant nor important
4 = important
5 = extremely important
0 = no opinion

PERFORMANCE

1 = extremely dissatisfied
2 = dissatisfied
3 = neither dissatisfied nor satisfied
4 = satisfied
5 = extremely satisfied
0 = no opinion

IMPORTANCE 1 2 3 4 5 0	SERVICE	PERFORMANCE 1 2 3 4 5 0
	a. accommodation of unique requirements	
	b. ease of doing business with ETEP	
	c. effective communications/access	
	d. content value	
	e. effectiveness of International Energy Fund	
	f. effectiveness of contract management systems	
	g. other (specify) _____	

13 *(If you are a geothermal company, please answer this question. If you are not, skip to question 14.)*
The CEC's Geothermal Resource Development Account (GRDA) currently funds domestic geothermal projects each year. What percentage of the annual funding would you support to assist California geothermal companies in international projects?

- a. 0 %
- b. 10 %
- c. 30 %
- d. 50 %
- e. other

14 Using the following rating scale, please rate options 14a-j as to their potential importance to your export company.

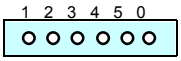
IMPORTANCE

1 = extremely unimportant
2 = unimportant
3 = neither unimportant nor important
4 = important
5 = extremely important
0 = no opinion

IMPORTANCE 1 2 3 4 5 0	OPTIONS
	a. promotional material and information transfer
	b. foreign buyer's assistance
	c. project pre-construction funding
	d. industry representative on scouting mission
	e. foreign energy policy advice
	f. information on institutional decision-making
	g. information on independent power energy tariff calculations
	h. identify new investment funds
	i. case study energy audits
	j. other (specify) _____

15 Please list any programs or activities that you feel the CEC/ETEP should consider in the future.

16 Rate the following statement. "The active support and involvement of the Energy Technology Export Program is important to increasing California's energy industry exports." (5: I strongly agree, 3: I neither agree nor disagree, 1: I strongly disagree, and 0: I have no opinion)



17 Comments on any other points not covered in the survey: